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DANIEL R. BROWER, M.D.

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Original Lectures.

ARTICLE I.

LARYNGEAL TUMORS AND TUBERCULOUS LARYNGITIS. Clinical Lecture. By E. FLETCHER INGALS, M.D., Lecturer on Diseases of the Chest and Physical Diagnosis, and on Laryngology in the Post Graduate Course, Rush Medical College.

The first patient I show you this morning was recently sent to me by my friend Dr. R. L. Leonard, of this city, on account of some difficulty experienced in breathing and speaking.

The patient, Mr. S. P., is sixty-nine years of age, is a man of good habits, and has enjoyed the best of health until two months since, with the exception of some hoarseness and cough.

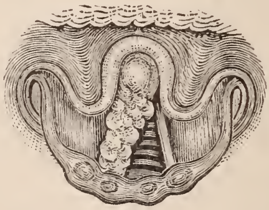
He complains that for the last eight weeks he has been suffering from "some form of asthma," which has caused difficulty of breathing, especially on exertion, and has several times excited paroxysms of suffocation. He has suffered no pain and, so far as we can learn, has had no constitutional symptoms. Twenty-two months since, he first noticed impairment of function in the vocal organs, as indicated by hoarseness coming on after speaking for a short time; this gradually increased until he came under my observation, when he could only speak in a low whisper, and was obliged to pause frequently to take breath.

The slightest exertion greatly increased his dyspnœa, and to-day he tells us that he finds it impossible to sleep on his left side, because of the difficulty in breathing in that position. He has had only a little cough, though he states that frequently he desires to cough but cannot. He expectorates a small quantity of frothy mucus.

Until recently the patient's digestive organs seem to have been in perfect condition, but since the dyspnœa has been so great, his appetite has failed.

The pharynx is normal, the lungs yield no sign of disease and we naturally conclude that the cause of his trouble must be in the larynx.

At my first examination of this patient, I discovered a morbid growth, partly filling the glottis. Subsequent careful examinations, after the irritability of the throat had in a measure been overcome, revealed a large tumor filling about four-fifths of the chink of the glottis. This was of a pinkish white color, lobulated in form and seemed to be attached by a broad base to the right vocal cord and ventricular band. The right cord and the anterior third of the left were entirely hidden from view. The laryngoscopic appearance is well illustrated by this drawing.



The tumor slightly changes its position at times, so as to diminish or increase the dyspnœa, and this, together with the collection of tenacious mucus in the larynx and possibly some spasm of the glottis, an occasional complication in such cases, explains the paroxysms of suffocation.

Tumors of nearly every variety known to pathologists, have been found in the larynx; the greater part of them are benign, but encephaloid and epithelial cancers are not uncommon. Of the benign growths the papillomata constitute nearly three-fourths; fibromata stand next in frequency; following them fibro-cellular tumors, and then cystic growths which are comparatively rare.

Benign growths are said to originate in simple catarrhs, syphilitic and tuberculous sore throat, the exanthemata, particularly measles, croup, diphtheria and pertussis. Morell Mackenzie states that they originate simply in hyperæmia, and that syphilis and phthisis are not predisposing causes. Dr. Cohen, in his recent work, dissents from this opinion and gives statistics which show conclusively that tumors often occur in patients affected with syphilis or phthisis and which seem to prove that they, in some cases at least, are the direct result of these dyscrasiæ; however this may be, in the patient before us we cannot suspect any other cause than simple hyperæmia.

Prof. I. N. Danforth has examined portions of this tumor microscopically and he pronounces it a mixed sarcoma, made up of round and spindle-shaped cells, of the recurrent variety which is almost sure to return within five years in a malignant and fatal form. The grave prognosis which this opinion would induce us to give, is greatly mitigated by the fact that many cases of laryngeal growths in which the histological features have been decidedly those of cancer, have been proven clinically to be of a totally opposite character.

We have here none of the characteristic thickening or ulceration of malignant growths or those resulting from syphilis or tuberculosis; the even surface and peduncle common to fibrous and fibro-cellular tumors are lacking, therefore we conclude that this is a benign papillary tumor.

Tumors of this character usually develop slowly and after attaining a certain size they may cease to grow, when, if small, they often cause no annoyance excepting that due to the impairment of the voice; but if the tumor reaches a size sufficient to interfere with respiration either by spasm or mechanical obstruction of the glottis, it becomes a source of great and increasing danger to the patient, which if not removed will ere long cause fatal suffocation.

In young children the prognosis is specially unfavorable because the larynx is so small and the patient so intractable that it is a very difficult matter to remove the tumor through the mouth, nor are the prospects good of permanent relief by tracheotomy.

In adults who will submit to proper treatment, the prognosis as regards life is favorable, though in some cases a fatal bronchitis may be induced by tracheotomy, which occasionally becomes necessary. Some times even in adults it is impossible to remove the tumor through the mouth: in such instances if the growth enlarges so as to cause dyspnœa, tracheotomy must be performed; if it should subsequently cause considerable difficulty in swallowing, it must be removed after division of the thyroid cartilage by the operation known as thyrotomy. This operation has been performed in quite a large number of cases, but it has proven fatal in about one-third of these. After tracheotomy, breathing and deglutition may be easy and still a source of danger may remain due to the necessity for prolonged wearing of the canula in the trachea. This sometimes induces necrosis of the tracheal or laryngeal cartilages, affections which are synonymous with laryngeal phthisis and which have the same unfavorable issue.

The prognosis as regards the voice is good when the tumor can be removed through the natural passages. In fifty per cent. of such cases the voice will be completely restored and in more than half of the remaining cases it will be greatly improved. To justify the most favorable prognosis regarding the voice, the opening of the larynx must at least equal the average size and the fauces must not be abnormally sensitive; the tumor should not be extremely large and it must be single and pedunculated: when the opposite conditions are present or if the tumor is very small and located on the vocal cord the voice is not likely to be perfectly recovered.

In the case before us the orifice of the larynx is small on account of the position and shape of the epiglottis, and the difficulty of introducing instruments is greatly increased by the smallness of the space between the base of the tongue and the posterior wall of the pharynx, which is partly due to the unusual prominence of the lateral incisor teeth of the lower jaw. The central incisors have been lost and the remaining teeth are so prominent that the patient finds it impossible to hold the tongue properly without causing a great deal of pain when it presses on the teeth, consequently he cannot draw it out sufficiently. As the teeth are already loose I have suggested their removal, but the patient objects and I shall not insist upon it. This tumor is large and has a broad attachment, therefore, we cannot hope for perfect recovery of the voice, but as the growth is already of a size which renders it a constant source of danger there can be no question as to the proper course of treatment.

I hope to remove this growth by the natural passages, but I shall hold myself in constant readiness to perform tracheotomy in case the paroxysms of dyspnœa become serious.

I have already had several sittings with the patient. Owing to the sensitiveness of his throat and the other obstacles already mentioned I could hardly get a glimpse of the larynx at first and could not introduce the forceps until the fourth sitting ; at that time I removed with Mackenzie's tube forceps a portion of the tumor about the size of a large pea and since then I have removed with his common laryngeal forceps nearly all of the tumor which grew from the posterior half of the cord, but the angle of my forceps was so great that I could not reach the anterior part of the larynx without pressing forward the epiglottis, which would cause instant closure of the larynx so that the forceps had to be withdrawn.

I have an instrument to-day with a sharper angle which was made for me by Messrs. Sharp & Smith, of this city ; with it I expect to be able to reach that part of the tumor lying close to the base of the epiglottis.

I cannot see into the larynx with the light in this amphitheatre, but if a few of you will go with me into my operating room I will show you the tumor and method of operating. * * This simple argand burner will light the larynx very satisfactorily. With the throat mirror in position you can now see the condition I described to you in the lecture room : you will also notice some œdema of the right ventricular band which has resulted from the irritation caused by the instruments when pieces of the growth were last removed. Having warmed the forceps I now carry it behind the epiglottis and quickly down upon the tumor ; this causes closure of the larynx and I withdraw the instrument, bringing a piece of the tumor between its blades. This growth is so friable that it must be removed in fragments, for I can only secure that part of it which comes between the blades. If it were of firmer texture, the whole might possibly be removed at once.

Though I have succeeded in securing portions of the tumor at nearly every attempt, yet it is not all removed ; but as the patient is becoming fatigued we must desist.

I have to-day removed the greater part of the growth, but some fragments remain which I shall get at subsequent sittings, then if any minute portions cannot be secured, they will be cauterized to complete the cure.

Case II.—We have here another patient who comes to us complaining of hoarseness and dyspnœa. Mrs. M. is now twenty-five years of age, has been married several years and has one child now seven years of age.

She states that her voice has been affected for three months, and that she has had a cough about two years, but has not felt perfectly well since the birth of her child.

I can find nothing in her previous history, either personal or hereditary, which would lead me to suspect her cough to be of pulmonary origin, but you will at once notice the ominously sallow skin, bright eye and flushed and sunken cheek. She has lost flesh rapidly during the past few months and is now unable from weakness to attend to her household duties.

The skin is moist and of slightly increased temperature ; the thermometer under the tongue registers 38.8° C. and her pulse averages 130 per minute.

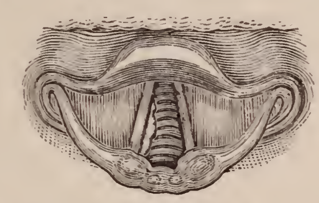
The hoarseness which was at first only slight, now compels her to talk in a low voice, scarcely louder than a whisper. She has dyspnœa on exertion and has formerly suffered from considerable cough, but at present it does not trouble her greatly. The expectoration is small in amount and of a muco-purulent character. The tongue is clean and moist and the throat normal in appearance, excepting a marked loss of its natural redness. Her appetite is fair, deglutition is not painful; and the digestive organs seem to be acting well. The menses are regular.

This is all the information we can obtain from the simple interrogation of the patient.

We must now examine the larynx in hopes of finding there the immediate cause of her trouble.

In looking into the larynx we observe a peculiar pallor of every part excepting the epiglottis and right vocal cord. The epiglottis is of twice its natural thickness and is bent sharply upon itself toward the base of the tongue, about five millimeters from its upper free edge. Just below the point of flexure the mucus membrane stands out in two or three small whitish projections which seem to mark the edge of an ulcer, but it is impossible to see the laryngeal surface of the epiglottis distinctly.

I have been able to catch a glimpse of a dark brown or black spot near the base of the epiglottis, which seems to be five or six millimeters in diameter and which probably results from destruction of the mucous membrane and exposure of the cartilage. There is no change in the ary-epiglottic folds. The right vocal cord is congested and thickened and just beneath it we find an abnormal growth which is fairly represented in this drawing.



This growth has a greyish hue and somewhat uneven surface. It is not, properly speaking, a laryngeal tumor nor is it simply infra-glottic œdema, but it appears to consist of an elevated fold of thickened mucous membrane. It has increased considerably in size since I first saw the patient, but I think it is not growing at present.

The appearance of this larynx, though not characteristic, leads me to strongly suspect laryngeal phthisis, a diagnosis which will be rendered positive if the lungs yield evidence of tuberculosis.

Upon examining the chest we find marked dullness over the lower part of the infraclavicular and the upper part of the mammary regions on the left side with broncho-vesicular respiration ; and fine mucous and subcrepitant râles over both apices. This leaves no doubt as to the diagnosis.

It is common in such cases as this for the larynx to be affected first on the side where the pulmonary disease is most marked, but it is not in this instance.

I have already stated that some distinguished laryngoscopists hold that morbid growths in the larynx are never caused by phthisis, but Dr. Cohen has found one-third of his cases associated with this disease. In the case before us, the tumefaction below the vocal cord cannot properly be called a tumor, though probably, if left to itself, its increasing size would soon compel us to class it with the case we have just considered.

In another case of laryngeal phthisis now under my care, I find a distinct tumor, the size of a large split pea, springing from the mucous membrane covering the right arytenoid cartilage; there is tumefaction of the right ary-epiglottic fold, and the history and pulmonary signs place the diagnosis beyond question. It is not at all probable that in these cases the morbid growths are simply coincidental.

Authors are unsettled as to the etiological relations of tubercle and laryngeal phthisis. Those who base their belief on clinical experience, as a rule, hold that laryngeal phthisis is not caused by tubercular deposits, while pathologists generally teach the reverse.

Personally, I am inclined to adopt the teachings of those who found their opinions on extensive clinical observation, rather than those based on a few isolated microscopic examinations, the results of which are often doubtful to microscopists themselves.

Laryngeal phthisis is nearly always associated with pulmonary consumption, sometimes preceding the latter, but generally following in its course, as it doubtless has in the case before us. The affection is characterized by thickening and ulceration of the larynx. The thickening usually appears first in the ary-epiglottic folds and subsequently affects other parts or it may begin in the epiglottis, ventricular bands or vocal cords; the ulceration is frequently first seen on the vocal cords, but in other instances it begins on the epiglottis or some other part; usually it commences in the lower parts of the larynx and extends upward. The ulceration may extend from the mucous membrane and destroy a considerable portion of one or more of the cartilages, but in other cases the cartilages themselves are first affected and finally becoming necrosed they act as foreign bodies in causing abscesses and destruction of surrounding tissues.

The prognosis in this affection is most unfavorable; patients seldom live more than from six to eighteen months and when any considerable thickening has taken place a fatal result is almost absolutely certain. Those cases in which the epiglottis is first attacked run the most rapid course. The ulcers show no tendency to heal and very little can be hoped for from treatment excepting to mitigate suffering, slightly prolong life and perhaps stay the progress of the local affection.

In the early stage of laryngeal phthisis when there is simple hyperæmia the local applications recommended for chronic laryngitis will often be found beneficial, and later on we may expect to check the progress of the disease in some instances by the application of mineral astringents, and thus prevent the distress incident to extensive ulceration, or necrosis and exfoliation of the cartilages. When the epiglottis or the ary-epiglottic folds are the seat of the ulceration, the tissues are likely to be destroyed to such an extent as to prevent proper closure of the glottis in the act of swallowing ; as a result fluids or food escape into the larynx and give rise to severe paroxysms of cough and suffocation, which are so very distressing that patients will sometimes go for days without food or drink rather than endure the suffering almost sure to follow attempts at deglutition.

While attending to the local symptoms, we must not forget the constitutional malady which requires the same treatment as uncomplicated pulmonary consumption.

In this patient I have made slightly stimulant and astringent applications to the larynx which have arrested the growth for the time being, but the applications, whether in the form of powdered insufflations or in solutions applied by means of a camel's hair pencil, cause so much spasm of the glottis that I shall substitute for them inhalations with which I hope to check in some degree the rapid progress of the disease.

The application which has been most efficient in this case consists of one part of the sulphate of berberina to eight parts of sugar of milk, about 0.10 Gm. of which have been applied to the larynx every second or third day. I have also tried the local application of calomel, bismuth and tannin, but although they often prove beneficial in laryngitis they have done no good in this case. On account of the suffocation caused by insufflations I resorted to the application of a solution of chloride of zinc, 2.00 Gm. to 50.0 Gm. of glycerine ; but it caused spasms, quite as severe as the powders. I therefore discontinued it and the patient is now using the following prescription :

℞. Coniæ 0.25 Gm., alcoholis 12.00 Gm., olei pinus sylvestris 12.00 Gm., magnesiæ carb. levis 8.00 Gm., aquæ qs *ad.* 100.00 CC, M., triturate. S. Teaspoonful to be used in a pint of water at 65° C. for an inhalation, every fourth or fifth hour.

When I first saw this patient she had little appetite, and I ordered strychinæ sul. 0.02 Gm. and tinct. ferri chlor. 0.50 Gm. three times daily, combined with calcii chloridum 0.65 Gm. I gave the chloride of calcium because, from an extensive use of it for nearly two years, I have become convinced that it exercises a very beneficial influence on a large percentage of phthisical patients.

The results of treatment have thus far been very satisfactory, but we can hardly hope for permanent benefit.

In this case I shall enjoin out-door exercise every pleasant day, and if it were possible I should send her to a climate where the air is uniformly warm and dry.

This treatment will undoubtedly benefit the patient, but I fear the progress of the disease will be rapid and her history will be completed within three or four months.

A LITTLE book has been sent to each practising physician and surgeon in the United States, whose name and address are known to the Census Office, with the request that each will keep therein a record of all deaths occurring within his practice during the year June 1, 1879, to May 31, 1880, and will return the register at the close of the year to the Census Office. It is hoped that this effort to improve the Vital Statistics of the United States will meet with general approbation and receive the countenance and support of the profession.

Original Communications.

ARTICLE II.

TUBERCULAR MENINGITIS. By CHAS. W. EARLE, M.D., Prof. of Diseases of Children, Woman's Medical College, Chicago.

War, pestilence and famine have been regarded as the three most dreadful calamities which may befall a race.

If a student of those causes which consign more than one-fifth of all born into the world to early graves before the end of the first year, and one in three before the completion of the fifth year, were asked to enumerate the three principal classes of infantile diseases contributing in the greatest degree to this terrible destruction of life, he would in all probability say:

1st. Diseases of the throat and larynx, in which stenosis is the principal symptom.

2d. Entero-colitis with its consequent sequelæ of mal-nutrition; and

3d. Cerebral diseases, among which is found the quite frequent and almost uniformly fatal malady termed tubercular meningitis.

To this disease, and more particularly to the consideration of its causes, pathology, diagnosis and prophylactic treatment, I have the honor to call your attention this evening.

Much confusion has been caused by the different synonyms of this disease, and confounding with it simple meningitis. The differentiation between simple and tubercular meningitis I shall notice and attempt to establish, as far as possible, at another place in this paper. The different terms which have been used to convey the idea we now mean by tubercular meningitis, I will notice and dispose of at this time:

Acute hydrocephalus, basilar meningitis, hydrops cerebri, carus hydrocephalus, Whytt's disease, water on the brain, water brain fever.

This list could easily be enlarged, but the variety of terms already given is sufficient to show the great diversity of opinion which has existed in regard to a disease which at the present day is quite generally conceded to be due to abnormal cell proliferation, and may take place not only in the subject having a tubercular taint, but in a perfectly healthy child, who has been subjected to any of those causes which will produce rapid and imperfect or atypical cell growth.

The symptoms of this disease have been divided into three stages. Such a division must necessarily suffer change, but in the study of the disease, it is perhaps well to recognize them.

First, is the stage of *irritation.* The symptoms present at this time are variable and peculiar, and will in all probability only be recognized in those having distinct symptoms of tuberculosis, usually of the pulmonary variety. There is progressive emaciation, particularly marked in the body and wanting in the face, sometimes headache but more frequently vertigo and unsteadiness in walking, and in many cases constipation, or alternate diarrhœa and constipation, usually however preceding any symptoms referable to the head we find a slight fever in the afternoon, and in most of the cases vomiting. The fever is decidedly remittent, and the vomiting, unless seen by the physician, is easily explained by the attendants as caused by some slight indigestion, or due to biliousness, a favorite disease, as you all know, among the people. The fever is very liable to mislead, and taken without a careful consideration of all other symptoms, the disease at this time may be diagnosticated as infantile remittent. I have made this mistake myself, and have seen it occur in the practice of those older and possessing far greater diagnostic powers than I do. The vomiting is cerebral usually from the first; it is forcible, ejected to some distance from the mouth, not, as in indigestion, attended with nausea, eructations and the like, but expelled with great force with none of those concomitant symptoms. During the close of this stage, which in my experience lasts from 6 to 10 days, the child becomes feverish and very irritable. It throws itself about from place to place, is contented only for a moment in its mother's arms, and then only for a moment in the arms of the next attendant. It throws its head and arms wildly about, and the good natured and happy little one becomes cross and exceedingly restless. In many cases, especially those who have been relatively healthy and not the subjects of the tubercular or scrofulous diathesis, and yet who die of tubercular meningitis developed in a manner and from causes I shall presently enumerate, these symptoms of progressive emaciation are not present. The first noticeable symptom, in many cases, will be a periodical fever, irritability and vomiting.

The second stage is that of *pressure*. The pupils, even before any other sign of this stage is present, will, if noticed carefully, be found contracted, but after the symptoms of this stage are fairly inaugurated, they will usually be found to be dilated. The child has become more quiet; there is in the early part of this stage occasionally a vacant stare, which in the course of a few days is succeeded by fixedly dilated pupils, which fail to respond to light, and in many cases absolute want of sight. The child may now be partially comatose at times, and convulsions and contractions often take place. Indeed, convulsions, either partial or complete, are liable to occur throughout the disease; also contortions of the muscles of the face, and grinding of the teeth. In one or two cases I have noticed a tendency to contraction of the muscles of the neck, and indeed this was the particular symptom in one case which alarmed the mother, after the restlessness and irritability of a week, which had been thought to be incident to teething, was quieted, and the mother was laboring under the delusion that her little one was improving. The quiet was coma, and the child was in the midst of tubercular meningitis. The pulse, which may have been somewhat slow, has at this time usually increased in frequency, and toward the commencement of the third stage begins to be irregular. This symptom has in a few cases been the first of brain pressure.

The third stage is that of *paralysis*. Coma increases — the pulse is very rapid and markedly irregular — the respirations are sighing — there is difficulty, if not inability, to swallow — the surface of the body, while hyperæsthetic at first, now comes to be anæsthetic — prostration increases — the eyes are covered with a film, and death closes the scene.

During all this I never have discovered anything particularly useful from the temperature or from observation with the ophthalmoscope. The value of the last named instrument, however, in the hands of other observers, I will notice at another place in this paper. In the recapitulation of symptoms given above, I have necessarily omitted many, and have confined myself to the picture of the disease pursuing a normal course.

Following I append a list of eleven cases, from which I deduce the results and opinions given in this paper.

I call particular attention to the family history, and to the indications of *trauma* as a cause of the disease.

Cases.

Name.	*Age.*		*Duration.*	
*Gracie N.	18 mos.	Scrofulous diathesis or taint.	2 days.	Father very healthy. Mother had enlarged glands at birth of this child, but since has become much stronger, and two children since born are apparently perfectly healthy.
Ida N.	11 mos.	Tubercular diathesis.	14 days.	Father died of consumption.
Nellie G.	3 yrs.	Scrofulous diathesis otitis.	15 days.	Both parents young and small. Purulent discharge from ears for months.
Walter G.	30 mos.	Scrofulous diathesis otitis.	11 days.	Otitis existed in father when young — a kind of chronic family complaint.
Charley V. V. With Dr. Jones.	15 mos.	Tubercular diathesis.	14 days.	Father in all probability has phthisis — so stated by family physician.
Maud C.	2 yrs.	Fell down stairs.	20 days.	No taint apparent. Father and mother were healthy. The child never had any prostrating disease.
Rollie P.	1 yr. 6 m.	Scrofulous diathesis	5 days.	Scrofula 2nd generation back.
Annie L. A.	2 yrs.	Fell down stairs.	1 month.	No taint apparent. Father and mother both dark complexion, Germans, and perfectly healthy.
Lilian N. With Prof. Danforth.	2 yrs. 9 m.	Fell down stairs.	16 days.	No taint apparent.
Thomas C.	15 yrs.	Necrosis tibia.	Symptoms referable to brain 10 days.	

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* It is quite probable that this case was acute non-tubercular meningitis.

Cases — Continued.

Name.	*Age.*		*Duration.*	
Emma G...................	9 mos.	Tubercular diathesis.	4 weeks.	Mother had three sisters die from water on brain. Commenced to emaciate 4 weeks before death; constipation; cross and irritable; fever p. m.; *cerebral tache;* head reracted toward side. Pulse 135, temperature 101, 5 days before death. Pulse 190, 2 days, before death.

In the majority of these cases we have evidence of the tubercular or scrofulous diathesis, and from the usual and accepted ideas of pathology we should have no trouble in divining the cause of the tubercular meningitis taking place in children born of parents with this taint.

The following case, No. 9 in the list, I give in full for several reasons. It was in a healthy family; there was an injury; a *post mortem* was permitted and tubercle was found. It illustrates one of a few cases which have come under my observation where, with our previously accepted ideas of pathology, it is difficult to trace the cause of the disease. I have discovered no new pathology; but we have here a field for study.

This case, then, I give in full, particularly the result of the *post mortem.* It occurred in the practice of Prof. I. N. Danforth, and was published by him in the *American Quarterly Microscopical Journal.* I saw the case in consultation, and was present at the autopsy.

Lilian N. came under Dr. Danforth's care April 4th, 1878. She was two years and nine months old, and had been, up to a short time previous, a bright, active and well-developed child, with a good degree of strength and health. She had blue eyes, a light complexion, and a fair, transparent skin. Some three or four months previous she fell downstairs, and received a slight contusion over the right parietal bone. It was not regarded serious, however, and was soon forgotten.

A few weeks later, members of the family began to observe that the child manifested unusual irritability and fretfulness, this being more noticeable from the fact that the little one had always been a remarkably cheerful and happy child. Her wonted cheerfulness and vivacity, however, were now replaced by depression and irritability. She would cry long and vigorously upon the smallest and most absurd provocation, and she was acquiring an unusual and unaccountable temper. At this time the doctor was called. The child presented these peculiarities of disposition: had a fever every afternoon, and had the appearance of "being moderately sick and very nervous and cross from an ordinary infantile remittent." The case rapidly grew worse, and the doctor noticed unmistakable symptoms of meningitic disease. Dr. Bridge now saw the child, and a day or two following I was requested to visit her. It seemed to me that there was no question about the diagnosis, and subsequent events demonstrated the correctness of the conclusion. The child die twelve days after the doctor was called to see it.

A *post mortem* was held the following day, at which were present Drs. Danforth, Duncan and the writer. The body was not very much emaciated; the disease having run an unusually rapid course, the wasting of the body was somewhat less than usual.

The Head.—Very slight adhesions were found between the dura mater and the calvarium. The dura mater was opaque and slightly rough, and its usual glistening appearance was gone. Along the line of the sagittal suture, numerous white elevations as large as a bird-shot were seen. The vessels of the dura mater were engorged with blood. Well-marked fluctuation was felt when pressure was made upon the surface of the dura mater. Upon removing the dura mater, the vessels of the arachnoid were found to be greatly distended with blood, and inflammatory products were plainly visible on both margins of the longitudinal fissure. Upon examining the smaller vessels of the arachnoid with a hand-glass, a great number of minute, bead-like nodules were seen around and along their margins. The microscopic structure of these nodules will be described presently. The common vascular plexus of the pia mater was the seat of very extensive tubercular deposit; upon nearly all the smaller vessels masses of tubercle were deposited; some of these masses were too small to be seen with the naked eye; some were so large as

DESCRIPTION OF PLATE, from a Camera Lucida Drawing by Dr. Mary J. Mergler.

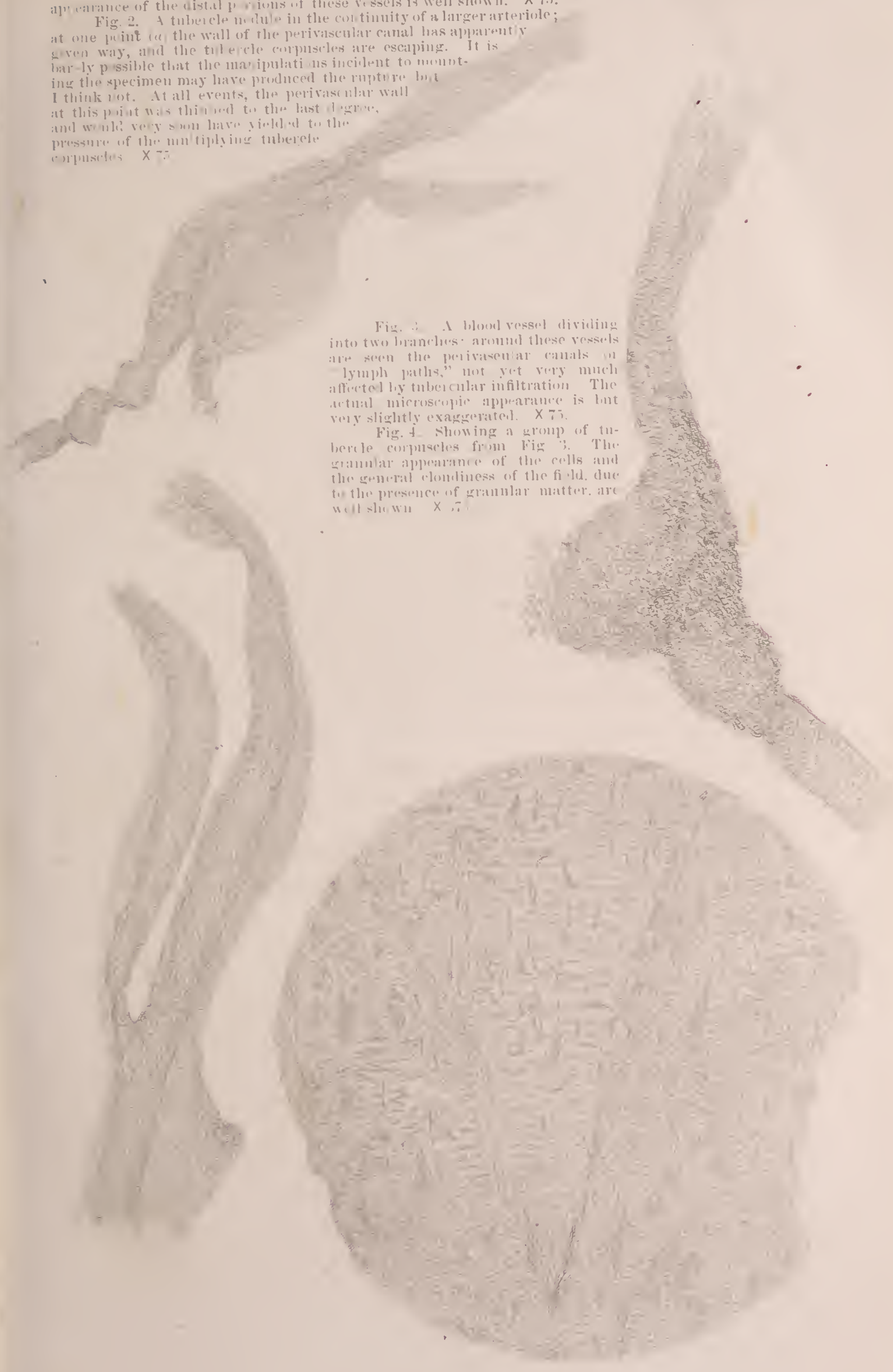

Fig. 1. Showing a fusiform nodule of tubercular deposit, at the point where the arterioles originate. The shriveled appearance of the distal portions of these vessels is well shown. X 75.

Fig. 2. A tubercle nodule in the continuity of a larger arteriole; at one point (a) the wall of the perivascular canal has apparently given way, and the tubercle corpuscles are escaping. It is barely possible that the manipulations incident to mounting the specimen may have produced the rupture but I think not. At all events, the perivascular wall at this point was thinned to the last degree, and would very soon have yielded to the pressure of the multiplying tubercle corpuscles X 75

Fig. 3. A blood vessel dividing into two branches: around these vessels are seen the perivascular canals or "lymph paths," not yet very much affected by tubercular infiltration The actual microscopic appearance is but very slightly exaggerated. X 75.

Fig. 4. Showing a group of tubercle corpuscles from Fig 3. The granular appearance of the cells and the general cloudiness of the field, due to the presence of granular matter, are well shown X 75

to present distinctly projecting, nodular eminences upon the periphery of the vessel, but the great majority consisted of deposits from the size of a small pin's head to the size of a medium bird-shot. They generally surrounded the vessel, and were either fusiform or spherical. Each nodule was quite isolated, and seemed to be the product of a special center of growth. The microscopic appearances will be described hereafter. The floor of the lateral ventricle was not particularly changed, but the superior surface of the left posterior cornu was softened. The choroid plexus was very pale and anæmic. The floor of the fourth ventricle was thickened, and the seat of considerable tubercular deposit. The substance of the cerebrum and the cerebellum was slightly softened, but not otherwise changed. The thoracic and abdominal organs were healthy.

I come now to consider the cause, or, if more than one exist, the causes, of this terrible disease; a disease, concerning which Vogel and many others say, that in their experience not a single child has recovered—that the prognosis is absolutely fatal.

1st. Undoubtedly the great majority of these cases arise from one cause, namely, the presence of tubercular deposit in some other part of the body. A local cheesy deposit is usually found somewhere, and tubercular meningitis is part of a general tubercular disease. From the local point of infection, which may be in the lungs or bronchial glands, or any enlarged lymphatic, there is a distribution, either by way of the blood vessels or lymphatics. In the disease under consideration, it is quite probable that the blood is the means of conveyance, for, as we shall see, the lesions are largely in the vicinity and involving the smaller vessels of the base of the brain.

There can be no doubt but that a great majority of deaths from tubercular meningitis take place in families infected from hereditary taint. Sometimes an entire family is lost, the younger members from this disease, and the elder from tubercular troubles as we usually see it developed in adults. Under strict hygienic surroundings the little ones who have received the taint from parents may remain for a long time without its development—indeed it may never be developed, or, as I believe, it may be removed.

2d. While it may be thought that I am retrograding instead of advancing, it certainly seems to me that we are each year accumulating evidence which will ultimately make it certain that tubercle may be propagated by infection. That those intimately associated with the tuberculous often die of the disease, we cannot doubt, and there are now excellent grounds for the opinion long since expressed by Waldenburg, that minute particles exhaled and expectorated from the lungs, may be the medium of infection. (Smith.)

3d. A certain number of children whom I have seen die from tubercular meningitis, have presented no signs of the tubercular or scrofulous diathesis. It is true that I have not had the opportunity of making a post mortem in all these cases, but I have presented the results of one, which, although not enough to form any conclusion whatever, yet in connection with what others have said and observed shows, at least to me, the possibility of this disease developing in those who have no taint whatever, and who have never been exposed to those causes which may propagate the disease by direct infection.

Some one has said that tubercle is simply nodified *connective tissue*, and the experimental investigations commenced by Villemin in 1865, and followed out by Burdon Sanderson, Wilson Fox, Cohnheim and others, seem to demonstrate the fact that artificial irritation beneath the skin, producing an inflammatory product, may, after the lapse of time, by disseminating inflammatory lesions, produce in various organs and tissues, products which present a special tendency to become caseous. Not only is it found that the introduction of certain pathological products, such as tubercle, thickened pus, etc., will produce this result, but finely divided foreign substances not animal, as aniline blue, and traumatic irritations under the skin giving rise to inflammation, such as the use of the seton, will and have produced tubercle in the lung or other organs.

If these discoveries stand the test of future investigation, and are demonstrated to be true, they will be of great importance to us in tracing the causes of different forms of tuberculosis which have hitherto been obscure. The procedure in an experimental case is something like this. A minute particle of this inserted substance is carried to the lung or brain. At the point of deposit an inflammation, and abnormal rapidity of cell proliferation takes place, a product of rapid and imperfect growth is formed, atypical cell development and the so-called tubercle is the result. A child falls from its bed, or down a few stairs, or from a trunk or box, and strikes its head. It may vomit and give some slight evidence of cerebral disturbance, but it is soon forgotten. A very slight injury, not noticeable, was produced, a few drops of pus, or a small coagulum formed, or perhaps only nutrition to a certain part of the brain delayed or disturbed for a short time. It was the *trauma*, however, from which a slight deposit was carried, or around which rapid cell proliferation took place, the formative irritation has occurred, connective tissue has become modified and tubercle may be the result.

That a slightly traumatic injury in a perfectly healthy individual, without the peculiar susceptibility of which we hear so much, will produce tubercle we cannot of course say with certainty. It has seemed to have taken place in a few of my patients. But, with the least scrofulous taint in a child's system, if passed unheeded and no attempt is made to avert its development, no one thing is more clear than that a multitude of diseases, such as whooping cough, pneumonia, catarrh following measles, etc., are capable of rendering certain tissues cheesy, and places from which absorption may take place; and traumatic lesions of the extremities, joints or periosteum, with this tendency, are all that is necessary to produce the abnormal transformation of which I have spoken.

But not to extend to any further length the possible way by which tubercle can be formed in the brain, I will conclude what I have to say in regard to the pathology of tubercular meningitis by quoting from Dr. Danforth's paper, already referred to, the conclusions suggested by his own and other observations:

"1. The lesions peculiar to tubercular meningitis are necessarily, if not exclusively, confined to the smaller blood vessels of the membranes (especially the pia mater) and of the brain substance; and all other lesions are probably secondary to those above mentioned, and are directly or indirectly produced by them.

2. The lesions in question are *always* exterior to the tunica

interna, and therefore have no direct structural relation to the circulating blood.

3. The primary seat of pathological activity in tubercular meningitis, is in the perivascular spaces or canals, which surround the smaller blood vessels of the brain and its membranes, as described by His and others; and in its early stages at least, is essentially inflammatory in its nature, the inflammation being at first limited to the meninges.

4. As a consequence of the initiative hyperplasia, which results from, or rather forms a part of the process of the inflammation, an abnormal rapidity of cell proliferation takes place within the peri-vascular spaces; in other words, the leucocytes or bioplasts (Beale) contained in the lymphatic channels, are produced with unwonted haste, and therefore with corresponding imperfection, and the product of this rapid and imperfect growth is the so-called tubercle."

Diagnosis.

It does not appear to me that we have any one symptom pathognomonic of this disease, and it will be only by taking into consideration the entire group of symptoms with the hereditary predisposition, or the history of some traumatic irritation, that we can come to a safe diagnosis. With the cerebral diseases with which tubercular meningitis may be confounded, I cannot stop to speak; nor can I take your time in speaking of any resemblance tubercular meningitis in adults may have to typhoid fever. Typhoid is such a remarkably rare disease among young children in our country, that our diagnostic skill in this respect will hardly be taxed to any extent.

Remittent fever is the disease, more than all others in this climate which will be found to simulate the first stage of tubercular meningitis. The periodical fever, the vomiting and the indifference, almost drowsiness, which we notice in this fever, is exceedingly difficult to distinguish from the stage of tubercular meningitis I have mentioned. We usually find more restlessness and the peculiar cerebral vomiting, and some symptoms referable to the eyes in the meningitic disease. Undue vomiting for several days, and the persistence of the periodical fever after treatment with quinine, give me uneasiness, and in these cases I am always fearful that I am to have developed a more severe disease than any of those of malarial origin. Cases will frequently occur in which our diagnosis will have to be suspended for a few days.

The differential diagnosis between simple and tubercular meningitis, although exceedingly difficult and sometimes absolutely impossible, may be best understood by the following synoptical table:

Tubercular Meningitis.	*Simple Meningitis.*
1. For several weeks the child has emaciated. It has lost its strength and it has become peevish and irritable.	1. No prodromal period.
2. The child has in the majority of cases either scrofulous or tubercular antecedents.	2. Healthy progenitors.
3. May have cheesy degeneration from previous disease, or necrosis.	3. No previous disease.
4. Invasion. Symptoms obscure; periodical fever; vomiting; generally no local symptom for several days.	4. Invasion. Symptoms *acute;* intense continued fever; vomiting; violent headache, with great heat.
5. No convulsions in many cases until second stage; respiration unchanged.	5. Convulsions usually from the first; respiration very hurried.
6. The disease has every appearance of being mild and easily amenable to treatment.	6. The disease has appeared severe and dangerous from the outset.
7. Course from this time generally slow. The fever becomes continued; pupils changeable. Symptoms of brain pressure usually appear slowly; pulse irregular; coma; paralysis.	7. Course rapid; convulsions may take place with quick succession, and death result in from one to three days from the commencement of the attack.

The *tache cérébrale* is present in both diseases, and nothing pathognomic can be determined from it.

The ophthalmoscope has been used as an instrument of diagnosis in these diseases, but except as confirmatory of the general symptoms, it is not regarded of great value. In acute disease: "Stasis in the retina alone, indicates only general swelling of the whole brain; positive neuro-retinitis points to an inflammation at the base" (Huguenin).

Congestion and œdema of the optic papilla and surrounding tissue, with tortuosities of the retinal vessels, are more frequent in tubercular than in simple meningitis, since the inflammation and exudation more frequently involve the base of the brain; but diagnostic points of value in this disease can only rarely be made, as the symptoms observed are so nearly allied to those seen where tumor or abscess of the brain exist.

Treatment.

From what has already been said, it is inferred that the majority of observers believe this to be almost, if not entirely, a uniformly fatal disease. Of course I cannot here discuss the possibility of certain cases which have been diagnosticated as tubercular meningitis, and have recovered, being simple meningitis, or simple basilar meningitis. We know to a certainty that in almost every case in which the disease is fully developed, death is the final result, and that only in prophylaxis can a physician obtain any results at all satisfactory. The presence of the tubercular or scrofulous diathesis may in a great number of cases be removed, if one could but have the hearty co-operation of the parents. Mothers with this peculiarity should be informed in regard to the probable taint they are to communicate to their offspring, and everything in the way of nourishment and nutritious medicaments should be administered. It is quite possible that such mothers should not be allowed to nurse their children, although I am always unwilling to deprive any child under the year of its proper maternal food—"a food which nature does not afford, nor can art supply a substitute"—unless there is some grave reason for such deprivation. Children in whom there is the faintest possibility of such a taint, should be given the benefit of the country air, if possible—good hygienic surroundings, perfect nutrition—especially a sufficient dietary, for, must I say it, in this blessed land of ours, children do starve to death. Diseases which produce a tendency to the diathesis I have spoken of, should be prevented by avoiding the opportunities of receiving the contagion into the system. I know it is wholly impossible to prevent all children from coming in contact with whooping cough, measles, diphtheria and the like; but there is no reason why the effort should not be made with this peculiar class of children.

They should have the benefit of cod liver oil and syrup of the iodide of iron — the malt and hypophosphate preparations. Above all we should not, because a child is slightly tubercular or scrofulous, despair of either staying the disease or of ultimately restoring to the anxious parents a healthy and robust child. The hopeless pathology of fifty years ago, indeed, gave no hope, but more recent conclusions give a brighter future. While it is doubtful if tubercle in the brain is ever cured, it has been abundantly shown by Niemeyer and others that in other parts of the body it is amenable to treatment, and that by several modes recovery does take place. Rokitansky gives us three methods by which active tubercles may disappear, and there are many reasons why we should attempt the removal, or at least render inert these primary deposits, and thus remove from our patients the danger of secondary deposit and tubercular trouble within the brain. We should not wait till we believe tubercle is deposited, but from the moment we are satisfied nutrition is impaired, or in a condition where tubercular deposit may take place, we should commence treatment. I cannot take the time of the society by enumerating the particular combinations of medicine useful in these cases, or a categorical display of foods suitable in quantity and quality for these little patients. Indeed it would be quite gratuitous to enter into details in the presence of gentlemen so many years my senior. One suggestion and I conclude. It is generally believed that children are not injured by falls and contusions which in older persons would be quite noticeable. Undoubtedly in the main this is true, but if the recent experiments in traumatic irritation are established, it will be well for us as physicians — indeed, our duty — to inform our patrons that it is not absolutely necessary, in order to have a superior intellect developed in a child, that it be encouraged to fall from its bed, or from the tree in the back yard, or allowed to roll down the stairs as a pastime. Traumatic injuries should be avoided — not that one in a hundred die from them, but to avoid the death of this one, which may be the one above all others in which we are interested. It is a high calling to cure disease, to ameliorate suffering; but preëminently more sublime is it to prevent disease, to so change and fortify the youthful constitution which has come into the world maimed and crippled, that its future may be one of health and usefulness.

ARTICLE III.

THE CORN DOCTOR'S PROGRESS. By EDMUND ANDREWS, A.M., M.D.

Those who remember the humble but rascally corn-doctor of yore, who aspired to nothing higher than a simultaneous shaving of the corns and the purses of his customers, may learn that this despised business is undergoing a change, and that it bids fair to become as honest and legitimate a specialty as dentistry.

Some readers will remember one of the old stock who appeared years ago in Chicago, with a sign 3 feet wide and 25 feet long, lettered something as follows:

JOHN DOE, CHIROPODIST,
ANATOMICAL PROFESSOR OF THE PATHOLOGICAL DISEASES OF THE HUMAN FOOT.

He published pretended letters from Queen Victoria and Napoleon III., thanking him for the amazing talent and "grande habileté" with which he had pared their imperial corns, and charged ten dollars a corn for extraction, with a guaranty of permanent cure. He had a trick of shaving off the callosity in successive layers, and charging each layer as a separate ten dollar corn. In this way he found on one astonished Chicago gentleman nine corns on one spot, and in a few minutes delighted him by presenting a bill of ninety dollars. He took care to leave town before the corns had time to grow again.

This is a prosaic age, and such magnificent specimens of impudence appear no more among us. The enterprising corn-doctor has departed, and in his stead appears the modern chiropodist, who goes quietly and honestlv about his work, like other common mortals.

We have in Chicago five of them. They make no secret of their methods, and I had no difficulty in collecting the following information. They say with one voice that there is no literature of any consequence on the subject, and that they are obliged to learn the business from each other without the aid of books. In this, however, they are partly mistaken, for a good deal has been printed on the subject, but it must be confessed that most of it is of a wretchedly poor quality, and of such a contradictory character, that the less it is read, the less it will confuse the student. All text books on skin diseases and general surgery touch upon the subject, and there are numerous treatises and articles about it in French and German, but the absurd and contradictory remarks let slip by some of the most eminent authors are discreditable to our profession.

The Chicago chiropodists seem for the most part to be pursuing their business in an honest and reputable manner, and some of them have the very best families of the city and of the country among their patrons. They are rising by degrees towards the rank of a legitimate and honorable specialty, though at present they are decidedly lacking in the amount of education which they ought to possess.

Their work is upon corns, bunyons and ingrowing nails. For extracting corns the price is from half a dollar to a dollar each, and they take care of patients by the year for $10 or $20.

They have the same obscure and contradictory ideas about the structure of corns, which exist among authors, especially on the question whether there are originally any living papillæ running up through the central spike or "*racine*" of the corn. I have not learned of any investigations among them to settle the point, other than to note the little blood clots occasionally enclosed in the "racine."

Their instruments are simple. One family of chiropodists, which has branches in New York, Boston, St. Louis and Chicago, use mostly small, thin chisels, with the edges running obliquely across the blade. This is handled with a lateral movement, while a much narrower kind is used to work around and lift out the central root. Some instruments have round ends for working between the toes. After extraction the operator cuts a hole in a small piece of thick buckskin, and applies it over the spot by the help of adhesive plaster, and they thus relieve the patient for two or three months.

They all agree, of course, that faulty shoes are the cause of the corns, and their uniform direction for correct ones is to make the heels low, so that the foot shall not slide down upon the toes; to have it snug on the instep to hold the foot back, and to make the toes wide and long. One of them has a shop attached to his office, where he superintends the construction of proper shoes for his patrons.

A chiropodist named Willard has an operation for ingrowing nail, which may be original; at any rate, I have not yet found it in any book. He asserts, what is pretty nearly true, that the term ingrowing nail is a misnomer, the nail itself being unchanged in form. It is simply an overgrowing of the flesh, with inflammation. He neither extracts the nail nor slices off the overlapping flesh, but cuts out a narrow ellipse of tissue near the nail and parallel to its border, claiming that the border itself, where it rests against the edge of the nail, has its special structure adapted to its location, and ought not to be sacrificed. The removal of the strip of flesh being accomplished, he brings the edges of the wound together with fine sutures, thus drawing the border away from the nail, and effecting a cure. I have not yet tried the plan, but it seems worthy of being tested.

When the chiropodists have made a further advance in education, they will probably add the treatment of talipes to their work, but at present they are neither competent for it nor attempt it, except in a few instances.

They are now in a transition state, but we may hope in time to see them become a well-educated class of men.

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CHICAGO, NO. 6 SIXTEENTH ST., May 1, 1879.

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Clinical Reports.

ARTICLE IV.

COOK COUNTY HOSPITAL.

(Reported by JEROME H. SALISBURY, M.D., House Surgeon.)

I. Periodical Mania.

Case No. 23,205, A. C., was admitted Feb. 3d, 1879; age, 25 years; occupation, a driver; native of the United States.

He gave the following history:

He had been always healthy previous to the present attack, except that he received an injury to the head about eight years ago, from which he recovered perfectly. His habits have been temperate.

Fifteen days ago he came home in the evening earlier than usual, and talked in a strange, inconsistent way. He had three or four scratches on his head, and over the frontal bone was a lump 5 Cm. in diameter.

It was afterwards learned that he had fallen out of his wagon while in motion, but had gotten into it again, and was found under a shed insensible. That night he vomited constantly. About two o'clock a.m., he became rational, and continued so to all appearance for six days. During this time he had some headache, and complained of the noise and the light. He did not vomit after the first night and morning.

On the seventh day he had chills and fever. He lost his reason again at about 11 a.m., regaining it the next morning.

The next two days he had chills and fever, and became maniacal at about 11 a.m., regaining his reason the next morning. After this, until his admission to the hospital, he had a similar attack of mania every day at 11 a.m.

On admission, the patient was maniacal, undertaking to injure all who came near him, and talking wildly and inconsistently, His pupils were moderately dilated. His temperature was 37.8; his pulse strong and full. He was restrained by a straight jacket, and given doses of potassium bromide and hydrate of chloral. Towards evening he became more quiet. He rested quietly from about six to nine p.m., when he became restless and maniacal. Another dose of bromide and chloral was given, and he rested fairly well during the night.

The next morning, Feb. 4th, the patient was quiet. On account of the intermittency of the attacks, he received one half gram of sulphate of quinia at about 9 a.m. A dose of bromide and chloral was also given. The paroxysm of mania did not occur. In the evening the patient was quiet. He had a little headache, ate well, and his bowels moved.

Feb. 5th and 6th he received 25 centigrams of sulphate of quinia, and no paroxysm occurred. On the night of the 6th he was somewhat delirious, but not violent.

He was quiet all day on the 7th, but was not rational. The next day he became rational, and continued so. He improved in every respect until the 14th, when he was discharged recovered.

When last heard from, the patient was pursuing his business and was well, with the exception that he had some pain in the head whenever he became excited.

II. Cancer of Gall Bladder and Multiple Abscess of the Liver.

Case No. 23,264, M. McC., age 63; occupation, a janitor; born in Scotland. Admitted to the hospital Feb. 13th, 1879.

Patient's family history was good. At the age of 17, the patient had intermittent fever. At the age of 20 he had, while in South America, an attack of dysentery lasting about three weeks. At the age of 40 he had, while in India, a low form of fever prevalent in that country, which lasted about six weeks, the convalescence from which occurred in eight months. Since this time his health has been excellent. His habits have been temperate.

About two weeks previous to admission, he began to have severe headache and fever. The next evening he had a chill and a pain in the right lumbar region. The third evening he had another chill, with pain extending around to the front.

From that time until admission he had no chills, but the pain continued, with slight remissions and exacerbations. During this time his appetite was poor. His bowels moved once in the two weeks. He had no nausea nor vomiting.

On admission, the patient was seen to be fairly nourished. His pulse and respirations were normal. His tongue was large, moist and flabby. His appetite was poor, and his bowels had not moved for six days.

The liver was found to be somewhat enlarged and tender. The urine was: sp. g. 1028 — reddish yellow, neutral — no albumen, no bile. The urine was examined on the two succeeding days with the same result.

The conjunctivæ were somewhat yellow, but the jaundice was not very marked. February 17th, the jaundice was more marked and continued to increase until February 25th, when it became very marked, the skin being quite yellow. From this time until death, this symptom continued with slight fluctuations. February 23d, the urine gave a reaction for bile. Constipation and tenderness over the region of the liver were constant symptoms throughout the course of the disease. About two weeks after admission, enlargement of the veins over the region of the liver was noticed.

March 5th he had a chill and had chills at irregular intervals of two or three days until his death. His appetite became still poorer, and he emaciated greatly. His sleep was very poor. He had frequently pain in the lower part of the abdomen. He sweat profusely at night. He grew weaker gradually and died May 4th. His temperature for the last two months ranged from 97–99 in the morning, and from 100 to 103 in the evening.

Autopsy: Heart, lungs, spleen and kidneys, normal. The liver was very much enlarged and of a dark brown color. The extremity of the gall bladder and the surrounding tissue were the seat of a cancerous growth. The gall bladder was filled with a green, watery fluid, containing a number of gall stones. In the right lobe of the liver near its outer margin, were two secondary cancerous masses of the size of a walnut.

On section of the liver the hepatic ducts were found much dilated, and in their walls numerous small abscesses were found. Microscopical examination showed the cancer to be a cylindrical epithelioma, and the secondary masses were of the same character, rendering it probable that the cancer germs had traveled up the bile ducts to reach the spot where the secondary masses were deposited.

III. Stricture of Trachea.

No. 23,419, Matilda F., age, 31 ; occupation, housewife ; native of Germany ; admitted March 17th, 1879 ; family history, good. Her previous health was good until a year ago, when she took cold and began to cough. Her cough increased in severity, and also the quantity of expectorated matter until admission, being aggravated by fresh "colds." Two weeks before admission, she took to her bed, and had chills nearly every day until admission. On admission, the patient was poorly nourished and emaciated. She stated that the emaciation had come on since Christmas. Her appetite was lacking, but she had great thirst. Her tongue had a slight dirty yellow coat. She had some looseness of the bowels. She coughed a good deal and expectorated an abundant thick white sputum. She had considerable dyspnœa. She had night sweats. She had no pain anywhere.

Examination showed the percussion note good over the entire chest. Expiratory murmur prolonged both in front and behind. Dry and moist râles were heard scattered over the chest. The vocal resonance was good. The diagnosis made was bronchitis and asthma.

March 24th she had a chill; March 26th she had a chill. March 29th, a whistling murmur heard with the first sound of the heart, and heard only on the right side of the sternum, was found.

April 9th, the râles had disappeared. April 16th, had two chills. Her appetite at this time was good. On the 29th of April, she was feeling well. May 4th, she died suddenly with great dyspnœa.

Autopsy, 36 hours after death; heart, brain, liver and spleen normal. Some chronic gastric catarrh. Lungs: old pleural adhesions were found. There was found a catarrhal pheumonia of the anterior and inferior portion of both lungs; also a bronchitis of the larger as well as the smaller bronchial tubes. Just above the bifurcation of the trachea was found a fusiform stricture about an inch in length, and narrowing the caliber of the trachea to about a line in diameter. The stricture was in an ulcerated condition. Death was probably due to the blocking up of the narrowed trachea with a plug of mucus.

NOTES FROM PRIVATE PRACTICE.

ARTICLE V.

Three Cases of Dropsy of the Amnion.

In the February number of the JOURNAL AND EXAMINER appears an article from the pen of Gusserow, of Strasburg, upon the origin of the amniotic fluid which he claims to be exclusively a fœtal product, secreted by the kidneys of the child during the latter months of pregnancy. He bases his belief upon the fact that hippuric acid has been found in this fluid and therefore it must be derived from the urine of the child, because this acid is never found outside of that excretion. It may be possible for urine to be discharged into the amniotic cavity during the latter months of pregnancy, but that it is so discharged and is the cause of its accumulation there, I very much question. The amnion is formed from the external layer of the blastodermic membrane and contains a sero-albuminous fluid which constantly increases to accommodate the growth and movements of the fœtus. The quantity of this fluid varies in different pregnancies and when it accumulates sufficiently to cause premature labor or death of the fœtus, it then constitutes a disease denominated dropsy of amnion.

It is practically of no importance to the active practitioner whether the amniotic fluid comes from the child or from the mother as all therapeutical treatment is only palliative or positively useless as in the case herein reported, two of which occurred several years ago.

In November 1871, I was called to see Mrs. Watson, a large, muscular and well developed woman, age 36, suffering from an abdominal distention which she informed me had increased very rapidly during the last month, causing frequent palpitations of the heart, laborious respiration with inability to long retain a recumbent posture. She had transient pains in the loins and back and much tenderness over the uterus which seemed to occupy the whole of the cavity of the abdomen. She was in the eighth month of her fifth pregnancy. Diagnosis, dropsy of the amnion.

The following day she was taken in labor which made slow progress until the membranes were ruptured when an enormous quantity of fluid was discharged, flooding the patient, bed and floor, the amount of which I had no means of ascertaining. In two hours she was delivered of a still-born child weighing six pounds, perfect in limb and body but with its cerebrum entirely wanting and between the superciliary ridge of the frontal and the occipital protuberance no osseous formation, this area only covered by a loose and flabby integument giving the child a hideous and unsightly appearance. It was very difficult to ascertain the presenting position of this monster which probably had died before labor commenced when the mother had chills, several fainting fits and complete cessation of motion in utero. Under the use of ergot the uterus contracted firmly, expelling a normal placenta with only slight hæmorrhage, the mother making a perfect recovery.

In March 1872, was called to attend Mrs. Sappa, small, well formed blonde, age 24, in labor at full term of second pregnancy where the same dropsical condition occurred as in the case above reported, though in a minor degree. After a short labor a monster was born similar to the above, no brain or cranial bones above the ears; this surface covered by a loose skin well supplied with auburn hair. The child was alive at birth but never respired. The mother made a good recovery and has since passed a natural confinement with perfect child.

The following case is deserving of note because it shows that from whatever source this fluid is derived, the circumstances under which it accumulates are various and cannot be prevented or relieved by any systemic medication.

October 1st, 1878, was called to see Mrs. S., aged forty, six months advanced in third pregnancy, and suffering from an abdominal distention which seemed limited only by her capacity to still further enlarge. Diagnosis, dropsy of the amnion, prognosis, premature labor, certain treatment diuretics and cathartics. On the 3rd, she was taken in labor and upon rupturing the membranes more than three gallons of fluid were discharged into a vessel placed to receive it, soon followed by three perfect, and well developed boys of near six months fœtal life. There was one placenta with three amniotic apartments, which probably communicated with each other or were ruptured at the same time. The mother had some fever subsequently, yet made a perfect recovery.

The above cases suggest the following queries :

If liquor amnii is fœtal urine what caused it to accumulate so rapidly in those cases of imperfect development unless such an abnormal condition of fœtal growth increases urinary secretion, a fact which seems inconsistent with the known physiological action of secreting organs ? Were these blighted embryos caused by pressure of fluid cutting off the blood supply to the encephalon ? or did their atrophy produce such an accumulation ? Cannot this form of disease be explained by the laws of endosmose or exosmose of fluids, through or upon the surface of serous membranes when subject to irritation or inflammation ? If not, can three six months boys make three gallons of urine while in utero ?

Let the savans answer.

F. C. Robinson, M.D.

Article VI.

Hydrophobia, with Autopsy.

Late in the evening of February 23, 1877, a man was brought in a cart to the Cook County Hospital. He was escorted by a policeman to whose care he had been intrusted, but before he could be carried to a bed, in the very doorway itself, he ceased to breathe. The policeman then produced a note from a physician in this city, certifying that the patient was bitten by a dog, December 12, 1876, and that he had been now for four days exhibiting all the symptoms of hydrophobia. The hospital clerk recorded these statements, and then proceeded to lose the note, as well as all memory of the name and address of its author. Policeman and waggoner in like manner disappeared, and nothing remained but a friendless corpse, without any history beyond what has been now set forth.

On the following day, about eighteen hours after death, the body was opened in my presence. The lungs were engorged with black blood. The right side of the heart was distended in a similar manner. The left side of the heart was quite empty. The superficial vessels of the entire brain (cerebrum and cerebellum) seemed ready to burst with black blood. Exposure of the centrum ovale showed conspicuous puncta over its whole area. The cortical portion of the hemispheres, and all the gray nuclei in every portion of the brain, were congested, and, especially in the medulla oblongata, exhibited a beautiful peach blossom color. The membranes of the spinal cord, and the choroid plexuses shared in the general increase of vascularity. There was, however, no visible increase in the amount of the cerebro-spinal fluid. The other viscera were healthy. The entire brain and the cervical portion of the cord were placed at once in the hands of Dr. O. C. Oliver, Director of the Rush Medical College Histological Laboratory, who made several hundred sections from different portions of the specimen, but with only negative results. His methods of procedure were as follows:

" 1. Examination of sections of the frozen tissues in iodine serum.

" 2. Examination of sections made as above, and stained with carmine dissolved in ammonia.

" 3. Examination of similar sections in glycerine and acetic acid, instead of iodine serum.

" 4. Examination of sections hardened in alcohol and stained with boro-carmine, treated with alcohol to which one-third of its volume of No. 8 acetic acid had been added.

" Some of these sections were mounted in Canada balsam; others in glycerine.

" Sections of the cerebellum, carried through the corpus dentatum, and sections of the medulla oblongata, and of the Gasserian ganglion, were prepared in the same way, and were examined with powers varying from forty to four hundred and twenty diameters, without the discovery of any abnormal appearances.

"When the specimens were treated with acetic acid and glycerine (20 per cent. of No. 8), a magnifying power of four hundred and twenty diameters revealed a very peculiar appearance in the ganglion cells of the corpus dentatum, and in other cells. I at first mistook this for *granular degeneration* of the cell contents, but a comparison with the appearance presented by similar cells under different treatment proved it to be an artificial product of the acetic acid treatment."

It may be objected that this was not a case of hydrophobia. It is certainly a matter for regret that I did not have the patient under observation *ab initio ;* but the statement of the policeman, the medical certificate which undoubtedly did exist, and the macroscopical appearances at the autopsy, all concur to confirm me in the belief that we really had to deal with the results of a genuine case of the disease.

HENRY M. LYMAN, M.D.

NOTE.—May 24, 1879. After a careful comparison of his specimens with similar preparations made under the direction of Prof. Charcôt, in Paris, Dr. Oliver finds no reason for changing any of the opinions above expressed.

ARTICLE VII.

Hypertrophy of the Heart and Effusion within the Pericardium.

Since his return from a visit to Germany last August, Prof. C. W. Denhood, our late county recorder, has complained of frequent attacks of difficult breathing and constriction of the chest, and at times almost amounting to suffocation, the dyspnœa becoming so great that upon more than one occasion his attendants as well as himself thought he was dying. These attacks generally came on in the night, from one to two hours after midnight, and would last until 3 or 4 o'clock, when they would pass off with cough and expectoration of glossy mucus. In the morning, he would generally go about his business, and perhaps remain free for a week or two, when, after some slight exposure to cold, he would have a recurrence of the paroxysm, which was always accompanied with great reduction of temperature, small, feeble pulse and clammy skin, from deficient oxygenation. He generrally found relief from nauseants and sedatives, and sometimes chloroform and ether; these remedies he kept by him, and was in the habit of using as occasion required. About 2 o'clock on the morning of the 24th of February last, I was called to see him in what was supposed to be one of these paroxysms of asthma. I found him in a semi-recumbent posture, and breathing with great difficulty, with a wheezing or whistling noise. Pulse small and intermittent, 56 per minute; temperature, 80; skin cold and moist. He was hardly able to speak, but said that he suffered great pain from the right hip to the ankle, along the course of the sciatic nerve, but he was totally unable to move the right leg or foot. Restoratives were administered, but he rapidly sank, and died in an hour or two after I saw him, dropping away suddenly, like one falling to sleep. Eight hours after death, in company with four other physicians, I made a post-mortem examination. We found the lungs apparently healthy, but compressed and pushed out of place by the great size of the heart and its appendages, which occupied nearly thrice its ordinary space within the thorax. Not only was the heart greatly enlarged, as will be seen from the figures below, but the pericardium was enormously distended with a clear, watery fluid. The heart lay nearly transverse, and the pericardium was distended to its utmost, and looked like a large, distended bladder. After removal of the heart, the pericardium was punctured, and 1,344 C. C. of water drawn off and weighed. The auricles and ventricles were found filled with coagulated blood and fibrinous clots. After these were removed, together with the pericardium, the heart weighed 768 grams. The walls on both sides were thickened, and the whole organ greatly enlarged, but a careful examination revealed no structural disease of the valves. The question arises whether, if the true nature of the disease had been known, relief might not have been obtained by puncturing the heart case and drawing off the fluid with an aspirator; and again, would not this relief have been only temporary, and have to be repeated at intervals. He had only felt the disease troubling him since his trip to Germany some five or six months previous, but upon enquiring of his family, I learn that for four years or more he has suffered from a cough and sore throat and from slight attack of difficult breathing, but he would not call himself sick. He was a fleshy, robust looking man, of fine personal appearance, a generous liver and an indefatigable worker, being at the same time a musical professor, an editor of a weekly paper, an active and prominent politician and county recorder.

CHESTER HARD, M.D.

OTTAWA, ILLS.

ARTICLE VIII.

Beef and Ice Cream.

The following is an article of dietary importance. I believe it originated with me. It is simple, novel and speaks for itself so far as its efficaciousness is concerned. I combine ice-cream and beef so as to make a homogeneous mass. These are about the properties: 120 grams cream, 30 grams sugar, 8 grams ext. vanilla, 8 grams beef juice ("Johnston's" I have generally used, but the juice squeezed from beef steak is just as good). Any confectioner can make it extemporaneously (or within an hour) or it can be made at home at short notice. It has done me excellent service.

JAMES I. TUCKER, M.D.

THE WOMAN'S MEDICAL COLLEGE.—Dr. Wm. J. Maynard has been elected Professor of Materia Medica, Therapeutics and Dermatology; Dr. Wm. T. Montgomery has been elected Professor of Ophthalmology and Otology, and Dr. E. Fletcher Ingals has been elected Professor of Diseases of the Chest and Throat in this institution. These are wise selections; they will add to the strength and prosperity of the College.

R. S. DEWEY, M.D., 1st Assistant Physician of the Hospital for the Insane at Elgin, has been appointed to the superintendency of the new Hospital for the Insane at Kankakee—a good selection.

Society Reports.

ARTICLE IX.

AMERICAN MEDICAL ASSOCIATION.—THIRTIETH ANNUAL MEETING, HELD IN THE CITY OF ATLANTA, GA., MAY 6, 7, 8, AND 9, 1879.

TUESDAY, MAY 6TH. FIRST DAY.

The Association met in De Give's Opera House, and was called to order at 11 a. m., May 6, 1879, by the President, Theophilus Parvin, M.D. LL. D., of Indianapolis, Ind.

Prayer was offered by Rev. D. W. Gwin, D.D.

The address of welcome was delivered by Dr. Joseph P. Logan, Chairman of the Committee of Arrangements.

The following gentlemen were elected members by invitation: Drs. A. W. Griggs and J. E. McMillen, of West Point, Ga.; C. B. Ridley, of La Grange, Ga.; R. C. Worth, of Decatur, Ga.; J. Dickey, of Thomaston, Ga.; J. C. Walker, of Wilmington, N. C.; W. J. Harrell, of Bainbridge, Ga.; G. Ellis, of Boonville, Mo.; J. B. Roberts and H. N. Hollifield, of Sandersville, Ga.; B. W. Toole, of Talladega, Ala.; B. C. Eve, of Augusta, Ga.; J. T. Slaighter, of Villarica, Ga.; George Homan, of St. Louis, Mo.; and A. M. Owens, of Evansville, Ind.

The following gentlemen were elected permanent members: Drs. J. M. Johnson, H. L. Wilson, J. F. Alexander, C. Pinckney, Jas. A. Gray, D. H. Howell, W. Dean, H. B. Lea, R. B. Ridley, and J. T. Johnson, of Atlanta, Ga.

General F. A. Walker, of Washington, D. C., was invited to take a seat upon the platform.

Letters were read from Drs. H. I. Bowditch, of Boston, J. C.

Hutchinson, of Brooklyn, and H. R. Storer, of Newport, regretting their inability to be present at the meeting of the Association.

ANNUAL ADDRESS OF THE PRESIDENT.

Dr. Theophilus Parvin, of Indianapolis, then delivered his address, which was a most scholarly production, and was listened to with profound attention. The following is a brief abstract: After referring to the great subjects of human study—science, literature, philosophy, and theology—he passed to a department of medicine not limited by scalpel, test-tube, and microscope. Knowledge of the intellectual and of the moral nature of man was just as essential to the thoroughly furnished physician as any knowledge of the merely material organism.

At the very outset of our inquiries was, Why did medicine exist? What reason for it? It was born of human sympathy; it sprang from the heart of man, and was an evidence of humanity; it lived because it could live; it had a right to live. Medicine came in response to the cry of human suffering. Pain was the first lesson in the book of evil which most human beings read in such bitterness of sorrow. The problem of physical suffering, the mystery of pain, was then considered, and Alexander Bain's definition given: "Pain expresses an ultimate fact of human consciousness, a primary experience of the human mind, resolvable into nothing more general or more fundamental than itself." But why was that fact? The most obvious reason for the existence of pain was that which the word itself signified. Reference was then made to the various uses of pain. Even with the various utilities of pain, it still must be referred to as often a mystery—more was hidden than revealed.

Greater than the mystery of life was the mystery of death. Here reference was made to what had been written regarding this mystery by Bacon, Fontenelle, Maudsley, Johnson, and others. But what was man, thus made subject to disease and death? In the human ovum, which neither chemistry nor the microscope could distinguish from the common mammalian ovum, there dwelt physical potentialities, species, races, family, individuality. In that ovum there was the assured promise of all that made a perfect organism. The author then referred to facts of heredity, intellectual, moral, and pathological. Passing the evolution of the various parts of the human organism, the transition to the external world, and the shades of speculation as to when, where, and how man originated, he passed to the consideration of man as he now is, "the heir of all the ages." The general belief of mankind was that his nature was dual, and expressed by the terms *body* and *mind.*

The assertion of human duality included two propositions: first, man had a physical organization; and second, a mind. He first considered man as a material organism. He did not believe that the phenomena of living beings could all be referred to physico-chemical laws; but we must, with Beale, accept the idea of vital power as being super-physical, and with that idea its correlate, a living Creator of such power. Passing the perfections of the human body, the speaker reached the second proposition: "The complete conception of man includes mind." Had physiology reduced the facts of intelligence to the phenomena of matter? Certain utterances seemed to indicate that some answered the question in the affirmative. Many of the utterances, however, were open to criticism, if not to unequivocal rejection. The speaker then noticed some of the difficulties which were obvious in all schemes of mental physiology, or effort to interpret phenomena of mind by physical facts. The identity of corporeal and of spiritual phenomena was an affirmation which ought to be consigned to the list of impossible hypotheses. The speaker then passed to the problem of teleology, which commended itself especially to our profession. It was not set aside by the development theory; nor was it to be cast aside because of its abuses. Time was lacking to refer to the evidences of design presented by the human body; nor was it necessary, for every physician knew them. The author dwelt upon that part of his subject at some length. Accepting gratefully all the facts of science, let us beware of rejecting everything that might not be capable of mathematical demonstration, and compelling our assent by absolute necessity. There might be truths more important, but less open; we might hear the deep but distant murmur of the immortal sea as it beat against the shores of Time, ready to bear upon its mighty bosom the children of men from life to life, and the law of continuity be found as true of the spiritual as it was of the material world.

The address was received with great applause.

On motion, ex-President Davis, of Chicago, Gross, of Philadelphia, Toner, of Washington, and Richardson, of New Orleans, were invited to seats on the platform.

THE METRIC SYSTEM.

Dr. E. Seguin, of New York, made a report on the adoption of the metric system by the Association. On motion by Dr. Pallen, of New York, the consideration of the report was postponed until Thursday.

CONSOLIDATION OF SECTIONS.

Dr. A. N. Bell, of New York, called up an amendment offered at the annual meeting in 1878, and moved its adoption. It provided for the consolidation of sections *four* and *five*, to be hereafter known as section *four*, on Medical Jurisprudence, State Medicine, and Public Hygiene, etc.

QUESTION AFFECTING REGISTRATION.

Dr. Lilley, of New Jersey, asked whether a gentleman who was not in affiliation with any regular medical organization, when such organizations existed in the State in which he resided, could register as a permanent member of the American Medical Association upon the claim that he *had been* in affiliation with such organization. Referred to the Judicial Council.

The Association then adjourned to meet on Wednesday, May 7, at 9.30 a. m.

WEDNESDAY, MAY 7TH. SECOND DAY.

The Association was called to order at 9.30 a. m. by the President.

Dr. Logan, Chairman of the Committee of Arrangements, announced the following for election as members by invitation: Drs. T. H. Morgan, of Cochran, Ga.; A. Means, of Oxford, Ga.; J. R. Humphrey, of Acworth, Ga., and E. M. Nolan, of McDonough, Ga.

The following named gentlemen were elected permanent members: Drs. C. A. Simpson and John M. Johnson, of Atlanta, Ga.; Dr. George C. Dugas, of Ga.; J. A. Beasley, of Alabama, and M. J. Ealey, of Lafayette, Ga.

A telegram was read from Dr. J. A. Morton, of Columbus, O., announcing that the bill making provision for material for anatomical dissection had passed the legislature of that State.

On motion by Dr. Atkinson, of Philadelphia, the congratulations of the Association were extended to Dr. Morton, who had been mainly instrumental in securing the passage of the law.

On motion of Dr. A. C. Post, of New York, the Publication Committee was instructed to publish 5,000 copies of the President's annual address for *pro rata* distribution among the members of the Association.

Dr. Fricke, of Philadelphia, in accordance with instructions received from his County Medical Society, introduced a resolution asking that the American Medical Association request Congress to leave the present law regulating the duty upon quinine unchanged.

The resolution was laid upon the table.

Dr. Roberts, of Nashville, introduced a resolution asking Congress to remove the duty upon the alkaloids of cinchona. Carried.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON PRACTICE OF MEDICINE, ETC., BY DR. THOMAS F. ROCHESTER, OF BUFFALO, N. Y.

Dr. Rochester introduced his address by a reference to the epidemic of yellow fever which prevailed in the United States last year, and, with a view to answering the questions, Was it possible to ward off its invasion; or, in case of its appearance, to confine it within prescribed limits; he passed first to its *etiology*. Where the disease was born was known. It originated in the West Indies. It never originated *de novo* except in its primal birthplace. It could not be communicated from individual to individual by direct contagion, but through other media. The speaker then traced its mode of spread. Medicine would not cure it, nor would antiseptics or cleanliness prevent the progress of the disease. A *strictly enforced quarantine* was the means by which it must be arrested. Reference was then made to the successful quarantine at the port of New York. He believed that if any agent was ever found which would arrest the disease, it would be gasiform or aëriform. He concluded that part of his address by urging the establishing of a permanent National Health Bureau.

Reference was first made to the propagation of typhoid fever by means of *drinking-water*, and the credit given to Dr. Austin Flint, of New York, for first directing the attention of the profession to that method about thirty-five years ago. Special reference was also made to a paper on typhoid fever, by Dr. Van de Warker, of Syracuse, and published in the *Popular Science Monthly*. Dr. Rochester then spoke of the propagation of the disease by means of ice, and cited several instances in which that mode of transmission was very apparent. He believed that the poison was not destroyed or impaired by freezing. A somewhat extended reference was then made to purification of sewage, and the opinion expressed that no sewer should be permitted to empty into a stream.

Under the head of Sanitaria for the Treatment of Pulmonary Phthisis, special attention was directed to Alpine sanitaria. Hygiene, in its largest sense, was recommended as the important factor in the management of the disease.

Instead of asking how little medicine was required, it was too common to act upon the principle of how much would be tolerated. Under the head of Materia Medica, attention was directed to certain new anæsthetics, the too promiscuous use of jaborandi, etc. The new Dispensatory was commended.

Dr. Rochester, under the head of Physiology, referred to papers by Flint and Busey, Flint, Jr., Richardson of Boston; Longworth, Bowditch, Whittaker, Loring, and others. In conclusion, reference was made to the telephone and the phonograph. Their possibilities could not be fathomed. The address was referred to the Section on Practical Medicine.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON STATE MEDICINE AND PUBLIC HYGIENE, BY DR. JOHN S. BILLINGS, OF WASHINGTON, D. C.

The number of patent ventilators and gas-traps was steadily upon the increase; but, in our knowledge of the causes of disease and the means of avoiding or destroying those causes, little or no positive advance had been made. So long as we had to contend with municipal and State authorities, which almost absolutely refused even the cost of obtaining reliable information, there was but little hope for satisfactory public hygiene.

If the law creating the National Board of Health was to succeed, it must be supported by medical men, and the call for aid from the Board should be responded to by the American Medical Association, which was the representative medical body of the nation. Its failure would, in a measure, be the failure of the medical profession, and its success would be their success.

The causes of want of interest in public hygiene by medical men were then noticed; and *First*, was the actual deficiency in accurate scientific knowledge upon the subject. There were but few physicians who would hesitate to act as health officers and give advice upon sanitary questions, and yet not one in one hundred had a thorough acquaintance with any one branch of public hygiene. Nor was it strange that such was the case, for the subject had for its true basis physics, biology, and political science. *Second*. Another cause for the neglect of public hygiene was a distrust of the capacity and motive of some of those who were prominent as professed sanitarians, and that distrust was founded upon the necessary relations that existed between sanitarians and politicians. Such association, however, was inevitable.

The subject of *vital statistics* was then noticed, but more especially the registration of deaths and disease. Such registration was a necessity to successful public hygiene. No scientific knowledge of the subject could be obtained until the character and the quantity of disease became a known quantity. Mortality statistics would not serve the purpose; and, until we learned how many cases of disease occurred under varying circumstances in different localities, no substantial advancement could be made. The difficulties of the registration of death statistics were then considered, and also the registration of disease. Special attention was directed to an opportunity to be offered for obtaining such statistics for the entire United States, as would be of positive value and furnish definite foundation for legislation with regard to public health. The opportunity would be afforded at the taking of the next census. He recommended that an appeal should be made to all the physicians in this nation, through the American Medical Association, to aid in furnishing the information needed. Books for the purpose would be sent to all physicians in the United States, as far as their addresses could be obtained, and they would be sent to any physician who made application for them.

An appeal was made to the medical press and to the profession to assist in the work.

The address was referred to the Section on Public Hygiene and State Medicine.

Dr. N. S. Davis, of Chicago, Chairman of the Special Committee to report on the recommendation made by Dr. Richardson in his annual address, relative to encouraging original investigation in medical science by means of prize essays, reported in favor of making alterations in the by-laws providing for four annual prizes of two hundred and fifty dollars each.

The report was signed by Drs. Davis, Gross, and Toner.

As an amendment to the by-laws, the report, under the rule, went over for one year.

Dr. Keller's amendment, that nominations for officers should be made only from the members and delegates present at any meeting, was laid upon the table by a vote of 120 to 5.

Dr. Caldwell's amendment, providing for a section on neurology and electrology, was laid upon the table without dissent.

Dr. Hitchcock's amendment was tabled.

Dr. Maddux's amendment providing for a section on genito-urinary diseases gave rise to some discussion, and was referred to the Surgical Section for instruction by a vote of 78 to 73.

The following amendment, reported by Dr. N. S. Davis, of Chicago, namely: "And hence it is considered derogatory to the interests of the public and the honor of the profession for any physician or teacher to aid, in any way, the medical teaching or graduation of persons knowing them to be supporters and intended practitioners of some irregular or exclusive system of medicine," was opposed by Dr. E. S. Dunster, of Ann Arbor, Mich., in a carefully prepared speech, was discussed by Dr. Davis, who suggested that, while he individually could not willingly teach students under such circumstances, the Association should be very careful about tying the hands of the profession in any respect, and bringing it into collision with public authority; and upon motion made by Dr. Pratt, of Mich., was laid upon the table for one year.

COMMITTEE ON NOMINATIONS.

Drs. W. O. Baldwin, of Alabama; R. G. Jennings, of Arkansas; R. B. Cole, of California; C. Y. Chamberlain, of Connecticut; C. H. Richardson, of Delaware; J. M. Toner, of District Columbia; J. P. Wall, of Florida; G. G. Crawford, of Georgia; H. A. Johnson, of Illinois; J. F. Hibbard, of Indiana; H. B. Ransom, of Iowa; C. V. Motham, of Kansas; Dudley S. Reynolds, of Kentucky; E. S. Lewis, of Louisiana; T. L. Estabrook, of Maine; T. B. Evans, of Maryland; L. B. Warner, of Massachusetts; J. H. Jerome, of Michigan; J. H. Murphy, of Minnesota; E. P. Gale, of Mississippi; A. B. Sloan, of Missouri; S. Lilly, of New Jersey; E. Grissom, of North Carolina; M. A. Pallen, of New York; W. H. Mussey, of Ohio; S. D. Gross, of Pennsylvania; C. H. Fisher, of Rhode Island; E. P. Porcher, of South Carolina; J. D. Plunket, of Tennessee; H. W. Brown, of Texas; A. S. Payne, of Virginia; S. Marks, of Wisconsin; W. H. Forwood, of U. S. Army; and T. J. Turner, of U. S. Navy.

The Association then adjourned, to meet on Thursday, May 8th, at 9.30 a. m.

THURSDAY, MAY 8. THIRD DAY.

The Association was called to order at 9.30 a. m. by the President.

The following gentlemen were elected permanent members: Drs. W. J. Harrell, of Bainbridge, Ga.; S. C. McCormick, of Duluth, Minn.; Thomas R. Wright, and R. C. Eve, of Augusta, Ga.; W. W. Evans, of Oxford, Ga.; J. H. Low, James B. Baird, and J. T. Johnson, of Atlanta, Ga ; and A. G. Whitehead, of Waynesboro, Ga.

The following gentlemen were elected members by invitation : Drs. Thomas J. Jones, of Hogansville, Ga.; J. P. Rosser, of Conyers, Ga.; C. F. Patillo, of West Point, Ga.; F. R. Calhoun, of Euharley, Ga.; R. H. Jenkins, of Hogansville, Ga.; David G. Hunt, of Dalton, Ga.; L. B. Alexander, of Forsyth, Ga.; C. H. H. Sayre, of New York ; and J. B. Carlton, of Athens, Ga.

The Secretary read a communication that had been addressed to the Chairman of the Committee of Arrangements, and purporting to come from Powers & Weightman, of Philadelphia, and C. T. White, of New York, in which the statement was made that if the duty on quinine was removed they could no longer continue its manufacture.

The communication was laid upon the table.

Resolutions relative to the death of Wm. N. Compton were introduced by Drs. Grissom, Pratt, and Toner, and adopted by the Association.

The following resolution was adopted:

Resolved, That the American Medical Association earnestly recommends to each and every physician in the United States that he shall furnish such information as is requested by the Superintendent of the Census, and that he shall keep such record of his cases for the year beginning June 1, 1879, as will enable him to make his information accurate and reliable.

Dr. Davis of Chicago, Chairman of the Committee, reported and offered the following resolution :

Resolved, That a committee of five be appointed by the President, whose duty it shall be to investigate the practicability of carrying into active operation a plan for obtaining accurate meteorological and clinical observations, and report at the next meeting of the Association. Adopted.

The report on necrology was presented by Dr. J. M. Toner, and referred to the Committee on Publication.

The report on sanitaria for consumptives was presented as received from Dr. H. I. Bowditch, of Boston, and, at his request, the committee was continued, in order that it might be able to make the report complete. At the request of the Chairman, Dr. Wm. Pepper, of Philadelphia, was added to the committee.

The report on catalogue of National Library announced that Congress had made an appropriation sufficient to allow of the early publication of two volumes.

The Committee on Publication reported that 1,300 copies of the Transactions for 1878 were published. The report was referred to the Committee on Publication.

The Treasurer's report showed a balance in the treasury at date, of $1,445.66. It was suggested that non-payment of dues for *two* instead of three years should work the forfeiture of permanent membership.

Report accepted and referred to the Committee on Publication.

The report of the Librarian showed that the library at present contained 2,816 volumes, exclusive of pamphlets.

Referred to the Committee on Publication.

Dr. S. E. Chaillé, of Louisiana, read a paper upon State Medical Societies and State Medicine, before the Section on State Medicine and Public Hygiene. By the Section it was referred to the Association, and was read in general session. From general facts with regard to State medicine, and practical conclusions based upon the position occupied relative to the subject by thirty-seven State Medical Societies, he brought forward two important questions which had not been sufficiently considered by the Association: — 1. What was State Medicine? and, 2. What could the Association do to the end that the practice of State medicine could be promoted? The progress of State medicine was dependent upon the enlightenment of public opinion. State medicine was the application by the State of medical knowledge for the common weal, and embraced every subject for the comprehension of which medical knowledge, and for the execution of which State authority were indispensable. With reference to State medicine, physicians were prone to dwell upon, and to denounce an existing evil, whatever it might be, and to urge its correction, but did not tell how it was to be done.

In answering this second question, Dr. Chaillé presented the progressive steps made in Great Britain with considerable detail, for he believed they were the steps which must be taken in this country. To the end of giving the greatest benefit which could arise from the proper practice of State medicine, he proposed a *Standing* Committee upon the more efficient organization of the Association and *all* its branches. Perhaps an executive council should be constituted and charged with the duty of devising ways and means to promote uniformity, as well as to strengthen and harmonize all of its practical operations. As at present constituted, the American Medical Association had little or no knowledge of its component parts ; and a head which had no knowledge of its parts should be gotten rid of. He suggested that the Transactions of the Association be published after the manner of the Transactions of the British Medical Association. No physician residing in the United States should be elected either as a permanent member or as a member by invitation of the Association unless he was a member of the State Medical Society of his own State, if such an organization existed. Several propositions of like character, and affecting the re-organization of all county and State medical societies, were submitted, after which the paper was referred back to the Section on State Medicine for further consideration.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON SURGERY AND ANATOMY, BY DR. MOSES GUNN, OF CHICAGO, ILL.

Dr. Gunn's address consisted of a careful and close argument upon the Pathology of Suppuration. He reviewed the theories which have been advanced regarding the origin of pus, by Virchow, Cohnheim, and Billroth, and the conclusion was reached that suppuration was not an unmixed evil. It was a dangerous thorn, from which occasionally, at least, a fragrant flower was plucked.

The address was referred to the Section on Surgery and Anatomy.

REPORT OF THE COMMITTEE ON NOMINATIONS.

Dr. S. D. Gross, Chairman of the Committee on Nominations, announced that the committee was ready to make a report.

Dr. E. Grissom, Secretary, read the following, which was unanimously accepted:

For President—Lewis A. Sayre, M.D., of New York.

For Vice-Presidents: First—R. Beverly Cole, M.D., of California. *Second*—E. M. Hunt, M.D., of New Jersey. *Third*—H. O. Marcy, M.D., of Massachusetts. *Fourth*—F. Perye Porcher, M.D., of South Carolina.

For Treasurer—Richard J. Dunglison, M.D., of Pennsylvania.

For Librarian—William Lee, M.D., of District of Columbia.

For Committee on Library—Johnson Eliot, M.D., of District of Columbia.

Next Place of Meeting—New York City.

Time of Meeting—The first Tuesday in June, 1880.

For Assistant Secretary—Walter R. Gillette, M.D., of New York.

For Committee of Arrangements—Dr. S. O. Vander Poel, of New York, Chairman; Drs. Stephen Smith, William M. Polk, Robert F. Weir, Charles Inslee Pardee, A. A. Smith and Thomas T. Sabine, of New York; Dr. Joseph C. Hutchison, of Brooklyn; Dr. M. H. Burton, of Troy, N. Y.; and Dr. E. H. Parker, of Poughkeepsie.

For Committee on Prize Essays—Drs. Austin Flint, Sen., A. C. Post, J. W. S. Gouley, and M. A. Pallen, of New York City; and J. C. Hutchison, of Brooklyn, N. Y.

For Committee on Publication—Drs. W. B. Atkinson, T. M. Drysdale, A. Fricke, S. D. Gross, Casper Wistar, R. J. Dunglison, of Pennsylvania; and Dr. William Lee, of District of Columbia.

The committee also reported the following nominations for Chairmen and Secretaries of Sections for 1880:

I. *Practice of Medicine, Materia Medica, and Physiology*—Dr. J. S. Lynch, of Maryland, Chairman; and Dr. W. C. Glasgow, of Missouri, Secretary.

II. *Obstetrics and Diseases of Women and Children*—Dr. Albert H. Smith, of Pennsylvania, Chairman; and Dr. Robert Battey, of Georgia, Secretary.

III. *Surgery and Anatomy*—Dr. W. T. Briggs, of Tennessee, Chairman; and Dr. J. Powell Adams, of Minnesota, Secretary.

IV. *Medical Jurisprudence, Chemistry, and Psychology*—Dr. James F. Hibbard, of Indiana, Chairman; and Dr. Thomas F. Wood, of North Carolina, Secretary.

V. *State Medicine and Public Hygiene*—Alabama, Jerome Cleveland, M.D.; Arkansas, W. H. Hawkin, M.D.; California, W. F. Cheney, M.D.; Colorado, C. Dennison, M.D.; Connecticut, C. A. Lindsley, M.D.; Delaware, William Marshall, M.D.; District of Columbia, Thomas Antisell, M.D.; Florida, J. P. Wall, M.D.; Georgia, J. P. Logan, M.D.; Illinois, H. A. Johnson, M.D.; Indiana, J. F. Hibbard, M.D.; Iowa, J. A. Blanchard, M.D.; Kansas, D. W. Stomont, M.D.; Kentucky, S. Brundeis, M.D.; Louisiana, S. E. Chaillé, M.D.; Maine, A. P. Snow, M.D.; Maryland, F. B. Evans, M.D.; Massachusetts, H. I. Bowditch, M.D.; Michigan, H. B. Baker, M.D.; Minnesota, C. N. Hewitt, M.D.; Mississippi, Wirt Johnson, M.D.; Missouri, H. H. Mudd, M.D.; Nebraska, J. Block, M.D.; New Hampshire, G. P. Conn, M.D.; New Jersey, D. A. English, M.D.; New York, A. N. Bell, M.D.; North Carolina, J. C. Walker, M.D.; Ohio, J. C. Reeve, M.D.; Oregon, H. Carpenter, M.D.; Pennsylvania, B. Lee, M.D.; Rhode Island, E. M. Snow, M.D.; South Carolina, R. A. Kenlock, M.D.; Tennessee, T. A. Acberson, M.D.; Texas, H. W. Brown, M.D.; Virginia, F. D. Cunningham, M.D.; Vermont, L. C. Butler, M.D.; West Virginia, E. A. Hildreth, M.D.; Wisconsin, J. T. Reeve, M.D.; United States Army, Joseph R. Smith, M.D.; United States Navy, A. L. Gihon, M.D.

VI. *Ophthalmology, Otology, and Laryngology*—Dr. Bolling A. Pope, of Louisiana, Chairman; and Dr. Eugene Smith, of Michigan, Secretary.

For Judicial Council—Drs. W. O. Baldwin, of Alabama; N. S. Davis, of Illinois; J. P. Gray, of New York; E. L. Howard, of Maryland; A. N. Talley, of South Carolina; D. W. Stomont, of Kansas; and J. P. Logan, of Georgia.

For Committee on Necrology—Dr. J. M. Toner, of District of Columbia, Chairman; Drs. R. F. Michel, of Alabama; F. W. Hatch, of California; J. B. Cummings, of Arkansas; Charles Dennison, Colorado; G. W. Russell, of Connecticut; J. H. Richards, of Delaware; J. P. Wall, of Florida; T. S. Hopkins, of Georgia; J. H. Hollister, of Illinois; G. L. Sutton, of Indiana; H. B. Ransom, of Iowa; C. V. Notham, of Kansas; D. S. Reynolds, of Kentucky; E. A. Lewis, of Louisiana; E. F. Sanger, of Maine; J. Morris, of Maryland; L. F. Warner, of Massachusetts; G. E. Ranney, of Michigan; D. W. Hand, of Minnesota; J. M. Richmond, of Missouri; J. R. Black, of Nebraska; L. G. Hill, of New Haven; H. D. Didama, of New York; J. Blain, of New Jersey; F. J. Hayward, Jr., of North Carolina; Starling Loving, of Ohio; Frank Woodbury, of Pennsylvania; C. H. Fisher, of Rhode Island; Manning Simons, of South Carolina; J. B. Lindsley, of Tennessee; H. W. Brown, of Texas; O. F. Fassett, of Vermont; L. S. Joynes, of Virginia; R. W. Hazlett, of West Virginia; J. T. Reeve, of Wisconsin; J. J. Woodward, of District of Columbia, United States Army; and A. L. Gihon, of United States Navy.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN, BY DR. E. S. LEWIS, OF NEW ORLEANS, LA.

The address by Dr. Lewis consisted of a *résumé* of the literature during the past year upon abdominal palpation, puerperal fever, laparo-elytrotomy, change of posterior position, ligation of the cord, traction upon the lower jaw, treatment of post-partum hemorrhage, treatment of cancer of the cervix uteri, and the treatment of uterine fibroids.

The address was referred to the Section on Obstetrics, etc.

THE METRIC SYSTEM.

The Association took up the report made upon the metric system, by Dr. E. Seguin, of New York, and adopted the following resolutions:

Resolved, 1. That the American Medical Association adopts the international metric system, and will use it in its transactions.

2. Requests that those who present papers at its future meetings employ this system in their communications, or reprints thereof.

3. Requests the medical boards of the hospitals and dispensaries to adopt the metric system in prescribing and recording

cases; and that the faculties of the medical and pharmaceutical schools adopt it in their didactic, clinical or dispensing departments.

4. Requests the physicians familiar with the metric system to help their confrères and the druggists in its application; and the delegates present at this session to work up the acceptance of the metric system by their respective county and State societies.

5. Requests our president to name a metric executive committee, of which he shall be the ex-officio chairman, and whose task will be to give unity and rapidity to this metric movement.

Dr. Chaillé, of Louisiana, introduced a resolution petitioning Congress to pass a law removing the duty from any one book or instrument which should be imported to assist in the personal pursuit of scientific study. Adopted.

Dr. Brodie, of Detroit, introduced a resolution which he asked to have referred to the Judicial Council: *Resolved*, That the use of articles thus protected by copyright is a distinct violation of the code of ethics. It was so referred.

Dr. Turnipseed, of South Carolina, offered an amendment providing for the formation of a section to examine and report regarding the merits and demerits of surgical and gynæcological instruments presented at the meetings of the Association. Laid over under the rule.

The Association then adjourned to meet on Friday, May 9, at 9.30 a.m.

FRIDAY, MAY 9. FOURTH DAY.

The Association was called to order at 9.30 a.m. by the President.

The following gentlemen, on recommendation by the Committee of Arrangements, were elected members by invitation: Drs. J. J. Jones, R. N. Ross, and E. Cross, of Arkansas.

The Surgical Section, through its Chairman and Secretary, reported that the proposition to establish a section upon genito-urinary diseases had been withdrawn.

The following resolutions affecting the organization of the American Medical Association, of State and of county medical societies, based upon Dr. Chaillé's paper, were offered:

Resolved, That a committee on the more efficient organization of this Association and of its branches—consisting of *five* members—be appointed by the President.

Resolved, That this committee be instructed to devise and recommend ways and means to secure greater uniformity as well as greater strength of organization of the State medical societies, and all their auxiliary branches.

With these ways and means the following be considered:

1. The compilation of a model code of detailed regulations for the government of State and county medical societies.

2. The requirement from any State medical society of an annual report, to contain certain data (to be specified) necessary to show the condition and progress of each of these State societies and of their auxiliary branches; to also contain a brief summary of the peculiarities of this organization, and of the measures being used by it to promote medical organization; and still further, to contain a brief summary of the laws of the State in reference to State medicine, and of the efforts being made to promote the practice of State medicine. Such reports should be published in the transactions of each State medical society.

3. The publication, in annual transactions of this Association, of a consolidated report of the above reports from each State, together with special notice of the meritorious work done by any of the branches of this Association.

4. The substitution of a periodical medical journal for the present volume of transactions.

5. The non-recognition by this Association of State medical societies which make no provisions encouraging the organization of auxiliary societies in counties, etc.

6. The advisability of electing no person, either as permanent member or member by invitation, unless such person be a member of a State medical society, provided that there be such a society, and recognized by this Association, in his State.

7. The advisability of refusing to admit to this Association delegates of the societies auxiliary to the State societies, unless the certificates of delegation be endorsed by the authorized officer of the State society.

8. The advisability of refusing to admit any delegates except

those selected from and elected only by voting members who have paid all fees due to their respective county and State societies, and of establishing the principle that only those members of branch societies who are entitled to vote, and have paid all fees due, shall be entitled to delegates.

9. The advisability of urging every medical college to have not less than one lecture delivered to every graduating class on the importance to the profession and to the people of medical organization.

The President appointed as committee to report upon the above resolutions: Drs. Foster Pratt, of Michigan; S. D. Gross, of Pennsylvania; N. S. Davis, of Illinois; A. N. Bell, of New York, and Alonzo Garcelon, of Maine.

A communication relating to intervention of physicians in education was received from Dr. R. J. O'Sullivan, of New York, and the request that the committee be continued was granted.

DELEGATES TO FOREIGN MEDICAL SOCIETIES.

Dr. E. Seguin, of New York; Dr. L. P. Yandell, of Kentucky; Dr. J. M. Da Costa, of Pennsylvania; Dr. Moses Gunn, of Illinois; and Dr. L. Turnbull and Dr. E. Warner, of Paris, were elected as delegates to represent the Association in medical societies in Europe; and Drs. J. C. Hutchinson, of New York, and William Brodie, of Michigan, as delegates to the medical societies in Canada.

The Committee on Nominations reported the following resolution: *Resolved*, That the Committee on Publication be instructed to advertise for proposals to publish the transactions of this Association in *six* of the largest cities of the Union, and that the contract be awarded to the lowest and most responsible bidder.

Dr. A. M. Pollock, of Pennsylvania, moved to lay the resolution on the table. Motion was lost.

Dr. Foster Pratt, of Michigan, moved to amend by striking out the words "in six of the largest cities of the Union." The amendment was lost by a rising vote of ayes 21, nays 27. The original resolution was then adopted.

On motion made by Dr. Grissom, of North Carolina, an honorarium of six hundred dollars ($600) was voted for the Permanent Secretary.

The following Committee on Ozone was appointed by the President: Drs. N. S. Davis, of Illinois; J. M. Toner, of District of Columbia; S. M. Bemiss, of Louisiana; W. H. Geddings, of South Carolina; and H. O. Marcy, of Massachusetts.

The following Metric Executive Committee was announced: Dr. Theophilus Parvin, of Indiana, Ex-officio Chairman; Dr. E. Seguin, of New York; Dr. E. Wigglesworth, of Massachusetts; Dr. J. R. Weist, of Indiana; Dr. E. R. Squibb, of New York; and Dr. William B. Atkinson, of Pennsylvania.

ADDRESS OF THE CHAIRMAN OF THE SECTION ON OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY, BY DR. H. KNAPP, OF NEW YORK.

Dr. Knapp's address consisted of brief references to a number of subjects, and a notice of some of the more important advancements made in the departments of ophthalmology and otology.

Iridectomy in chronic glaucoma was giving way to *sclerotomy*. *Sympathetic ophthalmia* was transmitted by the ciliary instead of the optic nerve, as advocated by some. Reference was made to *cataract extraction*, to the use of *eserine* and *duboisine*, to ophthalmoscopes, to lid-holders, to tumors of the eye, and to works on pathological anatomy.

Otology showed less extensive, but no less marked advancement than ophthalmology; and reference was made to discoveries in acoustics and the management of mastoid inflammation. A number of instruments and pathological specimens were exhibited.

The address was referred to the Committee on Publication.

The Committee on Prize Essays submitted the following report: That the prize of one hundred dollars ($100) be awarded to Dr. Allan McLane Hamilton, of New York City, for an essay on certain forms of primary and secondary (local) degeneration of the lateral columns of the spinal cord, with special reference to an infantile rare form.

Dr. N. S. Davis, of Chicago, offered resolutions of thanks to the President of the Association, to the Governor of the State of

Georgia, to the Mayor of the city of Atlanta and to all her citizens, to the various railroad and steamship companies that had extended favors, to the local press, and to the Committee of Arrangements, expressing the hearty gratitude of the American Medical Association for the uniform kindness, hospitality, and courtesy which its members had received.

The resolutions were unanimously adopted by a rising vote.

The report of the delegates to the Canada Medical Association was presented by Dr. William Brodie, of Detroit, Mich., and entered upon the minutes.

The Judicial Council reported in reference to Allen County matters, Indiana, that it be postponed until the next annual meeting; and that the American Medical Association did not regard the delegates from the Arkansas Medical Association as entitled to registration, because it did not regard the society which they represented as a State medical society.

The report was accepted and entered upon the minutes.

The Committee on State Boards of Health, who are required to report annually the results of their efforts, state that they addressed the usual memorial to the executives of the States still without State boards of health, and were assured by some of the executives that they would use their efforts to the end desired. They are happy to announce that the Legislature of the State of Delaware has adopted such an act, and the Board of Health of that State is now in process of organization. We now have nineteen State Boards of Health: Alabama, California, Colorado, Connecticut, Delaware, Illinois, Kentucky, Louisiana, Missouri, Michigan, Minnesota, Mississippi, New Jersey, North Carolina, Rhode Island, Tennessee, Texas, Virginia, and Wisconsin.

[Signed] W. B. ATKINSON.

The last business in order was the installment of new officers.

Dr. Parvin, in appropriate remarks, thanked the Association for the honor conferred upon him, the uniform courtesy which it had extended to him during the deliberations of the present meeting, and in laudatory words introduced the President-elect, Dr. Lewis A. Sayre, of New York, who expressed his feeling of appreciation for the highest honor that could be bestowed upon a medical man in this country.

On motion, the President declared the Association adjourned, to meet in the city of New York, on the first Tuesday in June, 1880.

REPORT OF SECTIONS.

Section on Practical Medicine, Materia Medica, and Physiology.

Dr. Thomas F. Rochester, of Buffalo, N. Y., Chairman. Dr. W. C. Glasgow, of St. Louis, Mo., Secretary.

TUESDAY, MAY 6TH. FIRST DAY.

The Section was called to order at 3 p. m. by the chairman. The first paper read was by Dr. N. S. Davis, of Chicago, Ill., and entitled Clinical and Meteorological Records. The object of the work of obtaining clinical and meteorological records was to obtain the actual etiology of acute diseases. Dr. Davis has been an active worker in this department, and his present report was a continuation of that already made to the same section at the annual meeting held in Chicago in 1877 (see *Medical Record*, vol. xii., p. 378). Beneficial results were still being obtained, and the field of observation was widening.

The paper was referred to the Committee on Publication.

Experience of Consumptives in Colorado, and Some of the Aëro-Hygienics of Elevation above the Sea, with Conclusions—Was the title of a paper written by Dr. Charles Denison, of Denver, Colorado, and presented by Dr. John P. Logan, Chairman of the Committee of Arrangements.

Some difficulty being experienced in reading the paper, the reading, on motion, was discontinued, and the further consideration of the subject was postponed until 3 p. m. on Wednesday.

The Section then adjourned to meet on Wednesday at 3 p. m.

WEDNESDAY, MAY 7TH. SECOND DAY.

The Section was called to order at 3 p. m. by the Chairman.

The first order of business was a continuation of the paper on "Aëro-hygienics of Elevation above the Sea," by Dr. Denison, of Colorado.

Dr. Denison asked that the Section recommend the Signal

Service Bureau to prepare charts to be published with his paper, and on motion, his request was granted.

The motion to refer the paper to the Committee on Publication gave rise to a discussion, but the papar was finally so referred.

On the Use of Water in the Treatment of Diseases of the Skin, was the title of a paper read by Dr. L. D. Bulkley, of New York. It contained the results of the large experience of the author in the use of water in the form of spray, baths, affusions, etc., etc., more especially in the treatment of chronic diseases of the skin. It was discussed by Drs. F. P. Porcher, of Charleston, S. C., and J. V. Shoemaker, of Philadelphia, Pa., and referred to the Committee on Publication.

The chairman's address before the Association in general session was presented by the Secretary.

Dr. T. B. Lester, of Kansas City, Mo., was called to the chair.

Dr. T. S. Hopkins, of Augusta, Ga., moved that the address by the chairman be referred to the Committee on Publication. The motion gave rise to discussion, which was participated in by Dr. Lyon, of New Orleans, who made special reference to the portion recommending the establishment of a national quarantine as a preventive of yellow fever. He said that the treatment of yellow fever was as well understood as was the treatment of any other serious disease; that yellow fever did originate in New Orleans, and that there was never a year that there was not yellow fever in that city that originated there. Dr. Lyon contended that quarantine laws did no good, and as proof, he said, that during the late war, when there was not and could not be any communication between New Orleans and the West Indies, there was not a single year but there were cases of yellow fever in New Orleans.

He contended that the disease was not contagious, and that it would in future, as it has done in the past, continue to originate in that city. He believed in local sanitary measures instead of the quarantine.

Dr. Hopkins, of Georgia, agreed with Dr. Lyon that yellow fever was of local origin, and that quarantine regulations were useless in preventing the disease.

Dr. Brown, of Texas, asked Dr. Lyon if quarantine did not keep the fever out of Texas.

Dr. Lyon replied that it did not, and asked the gentleman why it did not keep it out of Jackson, Miss., which was surrounded by men armed with shotguns.

The question was not answered.

Dr. A. W. de Roaldes, of New Orleans, said that in a large majority of years yellow fever originated in New Orleans. He believed that proper sanitary measures would prevent epidemics in that city. He did not favor a national quarantine law.

Dr. Rochester said he had not treated a case of yellow fever in twenty-eight years. He did not doubt that there were occasional cases occurring sporadic in New Orleans, but he believed that the quarantine would prevent the terrible epidemics.

Dr. Foreman, of the U. S. A., said that while the fever might originate in New Orleans, there were cities where it did not originate, and we needed the quarantine against the places in which the fever originated.

The motion to refer the address to the Committee on Publication was carried.

The section then adjourned to meet on Thursday, May 8th, at 3 p. m.

THURSDAY, MAY 8TH. THIRD DAY.

The Section was called to order at 3 p. m. by the chairman.

The first paper was read by Dr. G. F. Cooper, of Georgia, and entitled Veratrum Viride and Its Uses. It was an elaborate résumé of what was known concerning that drug and its uses. On motion it was referred to a sub-committee to be appointed by the chairman.

Dr. W. C. Glasgow, of Mo., followed with a paper on Plastic Bronchitis.

A review was made of the literature of this subject, and several cases were reported which had fallen under his care and observation.

On motion, the paper was referred to a special committee to be appointed by the chairman.

Inflammation of the Hair-follicles of the Beard, was the title of a paper read by Dr. J. V. Shoemaker, of Philadelphia, Pa.

The peculiar features of the affection were dwelt upon, and certain points in relation to differential diagnosis were fully considered.

The paper, on motion, was referred to a special committee to be appointed by the chairman.

There being no further business before the section, it adjourned.

Section on Obstetrics and Diseases of Women and Children.

Dr. E. S. Lewis, of New Orleans, La., Chairman. Dr. Robert Battey, of Rome, Ga., Secretary.

TUESDAY, MAY 6TH. FIRST DAY.

The Section was called to order at 3 p. m. by the Chairman.

Tubo-Ovarian Gestation (Case) Operation at the Fifth Month — Death, was the title of the first paper, and read by Dr. Robert Battey, of Ga. The paper consisted of a detailed account of the clinical history, the diagnosis, the operation and the autopsy. At the request of the author, it was withdrawn from the Section, with permission to publish in some medical journal.

Dr. Battey employed the écraseur to open the sac, and believed it to be the best instrument that could be employed, not excepting the galvano-cautery. He believed that the treatment of extra uterine gestation could not be governed by any fixed rules.

Electrolysis of Fibroids was the title of a paper presented by Dr. E. Cutter, of Massachusetts, and read by Dr. Dunster, of Michigan. It was merely an appendix to a paper read before the same Section at its meeting in Buffalo, 1878, and published in the *Am. Journal of Med. Sciences* in the same year. It was referred to the Committee on Publication.

The regular business before the Section having been transacted, the chairman called upon Dr. E. S. Dunster, of Ann Arbor, Michigan, to suggest some subject as a topic for discussion. Dr. Dunster responded by announcing the subject of Laceration of the Perineum — Treatment by Keeping the Bowels Open, Instead of Confined, After the Operation, and remarked that Dr. Thompson, of Washington, had drawn attention to that plan of management by a report of favorable results obtained in fifty-four cases—in no one instance had there been failure to get good union. About two years ago Dr. Dunster had occasion to operate on a case of complete rupture of the perineum, and, as a part of the preparatory treatment, ordered a laxative. The patient, by some mistake, took an overdose, and the consequence was that during the operation there were fluid discharges flowing from the rectum. After adjusting the sutures and bringing the cut surfaces into apposition, he noticed the *absolute absence of any strain upon the line of the wound* when a fæcal evacuation occurred. The case did well.

He operated upon the next case according to the old plan, and the wound, notwithstanding the care of a skilled nurse, tore open when the first movement of the bowels took place. Dr. Dunster then related two cases in which the bowels remained loose during the after-treatment, and in which complete success was obtained. In one there was a large rectocele, and the patient had from one to three fluid movements, daily, from the bowels. The stitches were removed on the ninth and tenth days, and although the pain and nervous excitement were quite irritating, the union was perfect and the success was good.

He had become convinced that, upon the whole, of course there were exceptions, it was a wiser and a safer method than the plan of constipating the bowels.

Dr. M. A. Pallen, of New York, remarked that the plan of securing looseness of the bowels after operation for rupture of the perineum, was the one which he had adopted for many years. He had recommended the plan in a paper published in 1874, and renewed the recommendation in a paper published in 1875.

Dr. King, of Pittsburgh, suggested that tincture of opium could be combined with a saline cathartic, and in that manner both soluble bowels and relief from pain and nervous excitement could be obtained.

Dr. Albert H. Smith, of Philadelphia, remarked that, upon theoretical grounds there was great force in Dr. Dunster's remarks. His experience, however, did not confirm the claimed value of the method, although he wished that it might.

Dr. Dowell, of Texas, believed that all the difficulties alluded to might be avoided by administering a full enema just before removing the sutures. Discussion was continued by Drs. Taliaferro, of Georgia, Cole, of California, and Parvin, of Indiana.

Dr. M. A. Pallen, of New York, then presented a new form of pessary for the correction of uterine displacements.

Dr. H. F. Campbell, of Augusta, Ga., exhibited a modified stem pessary.

The Section then became agitated upon the subject of pessaries, and discussion was continued until the lateness of the hour disappointed a number of speakers.

The Section then adjourned to meet on Wednesday, May 7th, at 3 p. m., and the subject of pessaries was made a special order.

WEDNESDAY, MAY 7TH. SECOND DAY.

The Section was called to order at 3 p. m. by the Chairman. The minutes of the previous meeting were read and approved.

Dr. H. O. Marcy, of Boston, Mass., exhibited and described Jennison's exploring and indicating sound in its complete form.

Comments were being made upon the instrument, when the secretary submitted that it was patented, and therefore had no right in the section. The chairman decided the point of order well taken.

Dr. Marcy also exhibited Dr. Chadwick's gynæcological table, and described its convenience and variety of use.

Treatment of Uterine Displacements by the Stem Pessary, was the title of a paper presented by Dr. E. Cutter, of Mass., and read by the chairman. The author recognized the dangers attending the use of an intra-uterine pessary, but believed that there were cases in which the displaced organ could not be held in position by any other form of instrument. The stem pessary employed by him was ordinarily about two and a quarter inches long, sometimes shorter, and was attached to a hard rubber elbow that was held in place by a band passing around the body of the patient.

The paper was referred to a sub-committee, consisting of Drs. Dunster, of Michigan; A. H. Smith, of Pennsylvania; and Cross, of Arkansas.

Dr. E. B. Turnipseed, of South Carolina, read a paper upon New Instrument for Operation for Vesico-Vaginal Fistula, with Cases, which drew the thanks of the section, and was referred to the Committee on Publication.

The instrument, when complete, embraced a new self-retaining speculum, retractors, large apparatus (used in stitching) bearing a smaller comb-shaped apparatus set with needles, which were clamped when the operation was completed; curved needles, gold triple-plated with hard-rubber clamps, with springs; trimmers, dilators on the principle of changeable valves, and a hysterotome.

Dr. M. A. Pallen, of New York, illustrated, by means of diagrams, his method of operating for lacerated perineum, which consisted essentially in transplanation of the flap dissected up so as to lengthen the vagina. Dr. Pallen also described the operation, Kolpokleisis in a Case of Procidentia, and illustrated it by means of diagrams.

Dr. Pallen also described and illustrated a plastic operation involving the vagina and the cervix, and as a substitute for amputation of the cervix uteri. The possibility of the operation had been denied by Dr. Emmet, because of the non-existence of elongation of the cervix uteri in the nonparous woman. To the operation Dr. Pallen gave the name vagino-cerviplasty, and recommended it for certain cases of apparent cystitis, painful coition, etc., when the cervix dipped into the vagina one inch anteriorly and perhaps an inch and a half or an inch and three-fourths posteriorly. He discussed the subject at great length.

The Section then adjourned, to meet on Thursday, May 8th, at 3 p. m.

THURSDAY, MAY 8TH. THIRD DAY.

The Section was called to order at 3 p. m. by the Chairman. The minutes of the previous meeting were read and approved.

Dr. Bartlett, of Wisconsin, was called to the chair, and the Section entered upon the consideration of the address of the Chairman.

Dr. A. H. Smith, of Philadelphia, alluded to change of presentations and positions of fœtus prior to labor. Those changes could in many cases be effected with ease and advantage. His efforts to convert a posterior position of the occiput into an anterior one, and maintain it, had been uniformly abortive. There was something peculiar in those cases which made them very obstinate. He did not bandage the abdomen after turning the child in utero.

Dr. Smith thought that the question whether the cord should be ligated early or late after labor was an unimportant one. His practice was to ligate it as soon as pulsation ceased.

Dr. H. O. Marcy, of Massachusetts, referred to Dr. Garland's method of treating prolapse of the cord by rotating the child in the uterus, thus winding the funis around its body.

Dr. Morris, of Ohio, doubted the propriety and the success of turning in the eighth and ninth months.

Dr. Lewis, Chairman, explained that the manipulation was effected with greater ease and safety than in the earlier months of pregnancy.

The address was referred to the Committee on Publication.

On motion by Dr. Warner, of Boston, Mass., the Section requested Dr. Battey to return his paper on tubo-ovarian pregnancy to its custody, and referred it to the Committee on Publication.

The discussion on pessaries was opened to-day by Dr. A. H. Smith, of Philadalphia. He made special reference to the action of the posterior ligaments — the broad, the lateral, and the anterior ligaments of the uterus — and spoke in high terms of the theory underlying the efficient Hodge pessary.

Dr. Pallen, of New York, took issue with Dr. Smith, and claimed that no man had ever found at postmortem a condition of ligament that would permit displacement of the uterus. There was no such term as a ligament of the uterus. The term was a misnomer.

The etiology of displacement was *primarily*, derangement of the pelvic circulation ; *secondarily*, laceration of the perineum or other conditions which removed sustentative circumferential support; and, *thirdly*, purely mechanical influences acting from either above or below. He denied the possibility of displacement occurring as the result of straining upon an inflamed ligament.

Dr. Pallen continued the discussion at great length, after which the Section adjourned.

Section on Surgery and Anatomy.

Dr. Moses Gunn, of Chicago, Ill., Chairman; Dr, J. R. Weist, of Richmond, Ind., Secretary.

TUSEDAY, May 6—FIRST DAY.

The Section was called to order at 3 p. m. by the chairman.

The chairman appointed as a sub-committee, to which all papers read before the section should be referred, Drs. W. T. Briggs, of Nashville, Tenn.; W. W. Dawson, of Cincinnati, Ohio; and W. F. Westmoreland, of Georgia.

Dr. A. C. Post, of New York, read a paper upon Deformities of the Face and Hands Occasioned by Cicatricial Contraction Following a Burn, with report of cases successfully treated. The paper was illustrated by means of casts and photographs, and showed one of the great advancements made in surgery. The paper was discussed by Drs. I. N. Quimby, of Jersey City, N. J.; W. T. Briggs, of Nashville, Tenn.; and W. W. Dawson, of Cincinnati, Ohio.

Dr. H. O. Marcy, of Massachusetts, then read a paper on Aspiration of the Knee-Joint. It contained an account of 68 cases and 118 aspirations. The quantity of fluid removed at each aspiration varied from half an ounce to eight ounces, and was serous, sero-purulent, and sero-sanguinolent. Death occurred in only one case. The best results were derived in acute inflammatory traumatic cases. The operation should be performed early; the joint should be reaspirated as often as fluid accumulated, and followed with an elastic bandage, fixation and rest.

Dr. Wm. A. Byrd, of Quincy, Ill., referred to a case in which he had successfully aspirated the knee-joint.

Dr. A. C. Post, of New York City, referred to a modified process of aspiration in the treatment of inflammation of the knee-joint. It consisted in drawing off the fluid through an aspirator needle, and then distending the cavity through the same needle with a solution of carbolic acid of the strength of 1 to 30. It was upon the principle of hyperdistention, according to Callender, and Dr. Post was disposed to regard it as an important modification.

———, a delegate, referred to the use of Dr. Martin's elastic bandage after aspiration. So far as his experience went, the results obtained had agreed with those reported by Dr. Martin, and had been very satisfactory. In simple cases of dropsy of the knee-joint, where he had aspirated, and then applied the bandage, there had been no return of the fluid. Of course as much benefit in cases in which the fluid was purulent could not be expected.

Dr. S. D. Gross, of Philadelphia, remarked that he had employed aspiration a few times, not only in the treatment of accumulations of fluid in the knee-joint, but also in other joints, and it seemed to him that aspiration should be regarded as an auxiliary measure. In all cases, proper attention should be paid to the general condition of the constitution of the patient; and to the aspiration might be added a variety of means which would tend to bring about a condition that could not be established by aspiration alone. To the aspiration, counter-irritation, elastic compression, etc., could be added with benefit.

Dr. I. N. Quimby, of New Jersey, preferred to resort to other means than aspiration in cases in which there was only a small accumulation of fluid in the joint.

Dr. Marcy, in closing the discussion, remarked that he heartily indorsed the remarks made by Dr. Gross; but the time allotted for his paper did not permit him to enter upon the general consideration of the subject.

Dr. E. B. Turnipseed, of Columbia, S. C., then exhibited a *new surgical needle curved, and spring-clamp at the point; also a new apparatus for treating fracture of the clavicle, with cases; and also described a new method of reducing dislocation of the elbow-joint*, with cases.

The new apparatus for treating fracture of the clavicle consisted in broad leathern collars encircling the shoulders, and united behind by straps from the upper portion of the band, and in front by straps from the lower portion of the collars.

The new method of reducing dislocation of the elbow-joint consisted in standing behind the patient, grasping the arm just above the elbow with one hand with the thumb upon the olecranon process, grasping the wrist with the other hand, and, while extension and counter-extension were being made, to suddenly extend the forearm, and at the same time make pressure upon the olecranon with the thumb.

Dr. S. D. Gross, of Philadelphia, remarked that there was nothing more easy than reduction of a recent dislocation of the elbow-joint. The plan suggested by Dr. Turnipseed was substantially that recommended by Dr. Waterman, of Massachusetts, several years ago.

Dr. J. S. Dodge, of Bristol, Ind., remarked that Dr. Turnipseed's method was the same as that taught by Dr. J. W. Greene at the University of Michigan.

Dr. J. C. Hughes, of Keokuk, Iowa, thought the method of treating fracture of the clavicle suggested by Dr. Turnipseed was no better than several appliances already in the hands of the profession. It was perhaps very convenient, but he failed to see its special value. Again, with regard to the suggestion made with reference to reduction of dislocation of the elbow-joint, he thought it did not possess the common sense that did the method by lifting the coronoid process out of the olecranon fossa.

Dr. L. A. Sayre, of New York, thought if the front strap was removed that Dr. Turnipseed's apparatus would be improved. It would then be very much like the old-fashioned figure-of-eight bandage, and no better.

Dr. W. W. Dawson, of Cincinnati, O., remarked that no apparatus had ever been devised which could keep the shoulder *outward*, except by making a lever of the arm, which it was impossible to do practically because of the pressure produced upon the vessels and the nerves. He thought the action of Dr. Turnipseed's apparatus was to bring the points of the shoulders nearer to each other, and therefore necessarily increased the shortening.

Dr. A. C. Post, of New York, thought that the apparatus did not possess any special advantages.

Dr. Glenn, of Nashville, Tenn., referred to an operation performed by the late Dr. Paul F. Eve, of Nashville, for fracture of the clavicle, which consisted in cutting down and wiring the fragments together with silver wire, closing the wound, and leaving it to unite. During the last five years of his life he succeeded in obtaining eminently satisfactory results in many cases.

Dr. W. T. Briggs, of Nashville, Tenn., remarked that the cases upon which Dr. Eve operated were those of ununited fracture of the clavicle, and that he merely suggested the operation for simple fracture of the bone.

Dr. Glenn remarked that he knew personally of one case in which Dr. Eve performed the operation for recent fracture, and with good success.

Dr. Turnipseed, in closing the discussion, remarked that the strap in front upon his appartus was intended simply to keep the collars upon the shoulders.

Dr. C. V. Mothram, of Lawrence, Kan., reported a case of chronic dislocation at the hip-joint.

Dr. W. W. Dawson, of Cincinnati, O., exhibited several specimens of vesical calculi, after which the section adjourned to meet on Wednesday, May 7th, at 3 p. m.

WEDNESDAY—MAY 7TH—SECOND DAY.

The Section was called to order at 3 p. m. by the chairman.

The minutes of the previous meeting were read and approved.

The first paper was read by Dr. I. N. Quimby, of Jersey City, and entitled Conservative Surgery.

It consisted essentially of a paper formerly read before the section at the annual meeting, held in Chicago, in 1877, the case at that time being incomplete.

Dr. Lewis A. Sayre, of New York, followed with a supplementary Report on the Treatment of Pott's Disease by Means of the Plaster-of-Paris Jacket.

The report contained a complete analysis of one hundred and eleven cases, with extended reference to opinions expressed by eminent surgeons both in this country and in Europe.

The paper was discussed by Drs. T. Clay Maddux, of Maryland; A. C. Post, of New York; H. O. Marcy, of Massachusetts; E. H. Dugas, of Georgia; I. N. Quimby, of New Jersey; W. A. Byrd, of Illinois; T. A. McGraw, of Michigan; and closed by Dr. Sayre.

On motion by Dr. Maddux, the thanks of the section was tendered to Dr. Sayre for his valuable report.

Dr. J. E. Link, of Terre Haute, Ind., read a paper upon Amputation by Open Cone-Shape Method, in which he claimed as advantages a better shaped stump and better results than by any other method; and also claimed that it was a method which originated with himself, and had not been adopted by any other surgeon.

Dr. W. F. Peck, of Davenport, Iowa, remarked that he had seen the same operation performed in Bellevue Hospital, New York, long ago, by Dr. James R. Wood.

The paper was discussed by Drs. Beck, of Ohio; Marcy, of Massachusetts; Byrd, of Illinois; Quimby, of New Jersey; Gracelon, of Maine; Fuller, of Maine; and closed by Dr. Link.

Urinary Calculus with Consideration of its Hygienic, Etiological, Pathological and Surgical Relations—with forty-six cases, was the title of a paper read by Dr. H. F. Campbell, of Augusta, Georgia.

The bilateral method was the one employed in all the operations.

The paper was discussed by Drs. Dawson and Mussey, of Cincinnati, O., and Dowell, of Texas.

The section then adjourned, to meet at 3 p. m. Thursday, May 8th.

THURSDAY, MAY 8. THIRD DAY.

The section was called to order at 3 p. m. by the chairman.

The minutes of the previous meeting were read and approved.

A paper by Dr. William Scott, upon Ècraseur for removal of Uterine Tumors, was presented by the Secretary.

Treatment of Hemorrhoidal Tumors by Carbolic Acid Injection, was the title of a paper read by Dr. J. R. Weist, of Richmond, Ind., Secretary of the Section. Dr. Weist called attention to that method of treating hemorrhoidal tumors, believing that it was superior to any yet employed. The theoretical objections that had been raised against it were the occurrence of thrombosis and embolism. By a series of experiments, Dr. Weist had reached the conclusion that carbolic acid had almost no coagulable power upon blood within veins.

Dr. A. C. Post, of New York, referred to Salmon's method, commonly known as Allingham's method, which had been performed many hundreds of times with almost uniform success in the practice of surgeons in this country, and regarded it as probably the most certain and the most safe mode of treatment at our command.

Dr. W. A. Byrd, of Illinois, referred to dilatation of the sphincter by the closed hand so as to allow the pile above to get well at the same time with the cure of the ruptured sphincter.

Dr. W. W. Dawson, of Ohio, remarked that his surgical operations for piles had been uniformly successful. He used the knife for the external, the ligature for the internal pile, and he had not yet had an accident follow the patient. He thought one secret of success was *positive* strangulation of the pile. He had not found it necessary to paralyze the sphincter before the operation. With regard to the new method, if experiments proved that there was no danger from embolism, it might be a good method.

Dr. J. W. Murphy, of St. Paul, Minn., referred to *twenty* cases which he had treated by the use of carbolic acid injections, and with good results in all.

Dr. H. W. Brown, of Texas, remarked that he had been using the new method in preference to either the ligature or the knife. He used the carbolic acid as nearly pure as possible, simply diluting it with a small quantity of alcohol, and he threw only a few drops into each tumor.

Dr. E. Smith, of Detroit, Mich., referred to treatment of piles by transfixing the tumor with a hot iron.

Dr. A. B. Cook, of Louisville, Ky., referred to his successful treatment of hemorrhoids by means of carbolic acid injections, and the form in which he ordinarily used it was one-half carbolic acid, one-fourth glycerine and one-fourth distilled water. The solution with glycerine should be perfectly clear ; if not so it was evident that the acid was impure, and should not be used. He emphasized the importance of introducing the point of the needle *into* the cavity of the tumor, thus avoiding the sloughing which would follow injection of the cellular tissue.

Dr. Dawson emphasized the non-use of the knife in the treatment of internal piles, and thought that for the removal of old hemorrhoidal tumors something more radical than injections was required.

Dr. A. C. Post thought that no *good* surgeon, at the present time, used the knife in the treatment of internal piles.

The next paper was read by Dr. T. Clay Maddux, of Maryland, On the Nature of Gonorrhœa, and was referred without discussion.

Dr. Thos. F. Rochester, of Buffalo, N. Y., presented a pathological specimen of typhlitic abscess opening into the bladder and the rectum, with its clinical history. Of perityphlitic abscess he had had twenty-three cases, and in nearly all he had obtained an autopsy. It was usually excited by disease in the vermiform appendix. The foreign bodies which were found, and so frequently called grape-seeds, fæcal calculi, etc., were in very many instances *gallstones*. In the case reported, the foreign body was originally a gallstone, as shown by analysis. The abscess opened into the bladder and the rectum, and the case was of about three years' duration. The patient asked for an operation, and the propriety of granting his request was fully recognized at postmortem.

Dr. A. M. Pollock, of Pittsburg, Pa., exhibited and described A New Instrument for the Administration of Anæsthetics.

It consists of a spiral cylinder open at both ends so as to freely admit atmospheric air. The specimen exhibited was about 8 inches in length by 4½ inches in diameter, and was made of a simple brass wire coiled spirally. The cylinder was to be enveloped by a towel. Its advantages were economy, cleanliness, and safety.

The section then adjourned. After the adjournment, Dr. Sayre, at the request of the section, applied the plaster-of Paris jacket to two cases of Potts' disease, for the purpose of giving the members a practical demonstration of the method of treatment.

Section on State Medicine, Public Hygiene, Medical Jnrisprudence, Chemistry, and Psychology.

Dr. John S. Billings, of Washington, D. C., Chairman. Dr. J. T. Reeve, of Appleton, Wis., Secretary.

TUESDAY, MAY 6TH. FIRST DAY.

The section was called to order at 3 p. m., by the Secretary, who announced that owing to the temporary illiness of Dr. Billings, it was necessary to elect a chairman *pro tem.* On motion, Dr. J. L. Cabell, of Charlottsville, Va., was elected chairman.

Dr. A. F. Bell, of New York, announced the death of Dr. Wm. N. Compton, the former chairman of the section on Medical Jurisprudence.

Dr. E. Grissom, of North Carolina, paid an eloquent tribute to the memory of Dr. Compton, who died while in the service in the late epidemic of yellow fever. The chairman appointed Drs. E. Grissom, of North Carolina, J. M. Toner, of the District of Columbia, and F. Pratt, of Michigan, a committee to draft suitable resolutions and present them to the Association in General Session.

The Regulation of Medical Practice by State Boards of Health, as Exemplified in Illinois, was the title of a paper read by Dr. H. A. Johnson, of Chicago, Ill.

The paper was a full exposition of the thorough reform effected under the provisions of the new law.

Dr. J. H. Rauch, of Chicago, spoke of the success of the present system of regulating medical practice, and the good it had accomplished for the people generally, as well as for the profession in elevating its grade.

Dr. Gihon, of the United States Army, believed in the thorough regulation of the practice of medicine by the State, in such a manner as to prevent quacks from imposing upon the public, simply because they could show a diploma.

The discussion was prolonged at considerable length.

Dr. S. E. Chaillè, of New Orleans, La., read a paper upon State Medical Societies and State Medicine, which, on motion by Dr. Bell, of New York, was referred to the Association in General Session.

Psycho-Physiological Hand, was the title of a paper read by Dr. E. Seguin, of New York City.

The theory of the paper was that, in cases of idiots, all education of intellect must begin by education of the senses. An interesting case was related.

The section then adjourned, to meet on Wednesday, May, 7th, at 3 p. m.

WEDNESDAY, MAY 7TH. SECOND DAY.

The section was called to order at 3 p. m. by the chairman.

Dr. E. Grissom, of North Carolina, read a fitting memorial on the death of Dr. Wm. H. Compton, of Mississippi.

The resolutions accompanying it were seconded by Drs. Taylor, of Kentucky, and Browning, of Mississippi.

The New Principles of Protective (Private) Sanitation in its Relation to Public Hygiene, was the title of a paper sent by Dr. H. R. Storer, of Newport, R. I., and read by Dr. E. S. Dunster, of Michigan.

The paper was referred to the Committee on Publication.

Dr. E. Seguin, of New York, made some remarks upon The Report on Intervention of Physicians in Education.

On motion, the address of the chairman was referred to the Committee on Publication.

Resolutions relating to the next census and the organization of the profession in all the States were then offered and adopted, and the section adjourned, to meet on Thursday, May 8th, at 3 p. m.

THURSDAY, MAY 8TH. THIRD DAY.

The section was called to order at 3 p. m. by Dr. J. F. Hibbard, of Indiana, the chairman-elect.

Dr. S. E. Chaillé, of New Orleans, La., presented resolutions looking toward the appointment of a committee on medical organization. The report was adopted.

The Medical Examiner System of Massachusetts, was the title of a paper read by Dr. F. A. Harris, of Massachusetts. It was referred to the Committee on Publication.

The Report of Dr. Billings, chairman of the committee on the question of hospitals, was read. It was accompanied by diagrams and lithographic illustrations of hospitals for small towns, on approved plans. It was referred to the Committee on Publication, with instructions to consult with Dr. Billings with reference to the manner of publication.

Dr. Alban S. Payne, of Virginia, presented a paper on The Treatment of Small-Pox in the Stage of Initial Fever, after which the section adjourned.

Section on Ophthalmology, Otology, and Laryngology.

Dr. Hermann Knapp, of New York City, Chairman; Dr. A. W. Calhoun, of Atlanta, Ga., Secretary.

TUESDAY, MAY 6TH. FIRST DAY.

The section was called to order at 3 p. m. by the chairman.

Dr. E. Williams, of Cincinnati, was elected Honorary Chairman, and Dr. B. A. Pope, of New York, Vice-President.

Dr. E. Williams, of Ohio, read a paper upon Ivory Exostosis of the Orbit, which consisted mainly in the history of a case. In future he would attempt to remove the exostosis without removing the eyeball.

Dr. O. H. Voorhees, of Memphis, Tenn., read a paper on Impairment of Sight Produced by Excessive Doses of Quinine, and referred to cases.

Dr. H. Knapp, of New York, then gave Demonstrations of Anatomical and Microscopical Specimens, and of Instruments and Apparatus.

A prolonged discussion upon Syphiltic Diseases of the Cornea, was held, after which the section adjourned, to meet on Wednesday, May 7th, at 9 a. m.

WEDNESDAY, May 7TH. SECOND DAY.

The section was called to order at 9 a. m. by the chairman.

Drs. B. A. Pope, of New York, A. W. Calhoun, of Georgia, and H. Knapp read papers on Cataract Extraction, and a general discussion followed, which was participated in by a large number of members.

The section, at 11 a. m., adjourned to meet at 3 p. m.

At 3 p. m. the section was called to order by the chairman.

The discussion of the subject of cataract extraction was continued.

An operation for the Cure of Cystoid Cicatrix, was the title of a paper read by Dr. D. S. Reynolds, of Louisville, Ky. In the proposed operation a thread was passed through the cornea; and the author stated that he had never seen keratitis follow the operation.

Dr. Eugene Smith, of Detroit, Mich., read a paper upon the

Cure of Xerophthalmia by Operation. The result of the operation was permanent union of the ball and the lids.

Dr. Knapp, of New York, presented *pathological specimens*. One, a case of plastic cyclitis; the other a ciliary body containing a chip of brass. A brief clinical history was given with the specimens. The section then adjourned, to meet on Thursday, May 8th, at 9 a. m.

THURSDAY, MAY 8TH. THIRD DAY.

The section was called to order at 9 a. m. by the chairman.

The Chairman read a paper on Disease of the Mastoid Process.

The paper gave rise to prolonged discussion, which was participated in by Drs. Leartus Connor, of Detroit, Mich.; B. A. Pope, of New York; E. Williams, of Cincinnati, Ohio; A. W. Calhoun, of Atlanta, Ga.; E. Smith, of Detroit, Mich.; and A. H. Voorhees, of Memphis, Tenn.

There being no further business before the section, it adjourned. (*N. Y. Med. Record.*)

ARTICLE X.

ILLINOIS STATE MEDICAL SOCIETY, Proceedings of the Twenty-Ninth Annual Meeting, held in Lincoln, on the 20th and 21st days of May, 1879.

The members of the Society assembled in the Opera House, and were called to order by the President, Dr. E. P. Cook, of Mendota, at 11 o'clock A. M. Prayer was offered by the Rev. George Stevens, of Lincoln; after which, T. T. Beach, Esq., in behalf of the Committee of Arrangements and citizens of Lincoln, welcomed the members of the Society to the hospitalities of the city in an appropriate and eloquent address. He complimented them as the conservators of the public health; and spoke of their annual gatherings as admirably calculated to promote the education, advance the science and to cultivate the social intercourse and friendship of the profession. He alluded to the ancient origin of the profession, and to the wonderful progress made in its science and usefulness in modern times. He spoke of the discoveries of Harvey, Jenner and others, and the opposition they had met from their contemporaries, and their ultimate triumph. He commended the faithfulness of the profession in the discharge of the most arduous duties at all times, and under all circumstances, to rich and poor alike. He did not think there was any class of community so ready to extend aid to the poor. He approved the laws establishing a State Board of Health and regulating the practice of medicine, saying that they had already done much good and ought to be sustained both by the profession and the community. He closed by again cordially welcoming the society to the hospitality of the profession and citizens of Lincoln.

The President called upon Dr. E. Ingals, of Chicago, to respond to the address. He said on taking the stand, that some of his colleagues from Chicago must have been playing a joke on him by inducing the President to call him up in the midst of so many so much more able to respond in fitting terms to the eloquent and cordial welcome to which we had just listened. We had come together for a brief respite from the round of daily toil, to advance our knowledge, to re-kindle our social feelings and to strengthen the ties of friendship, and in behalf of the society he fully reciprocated the kindly sentiments that had been so happily expressed. He did so with all the more pleasure because they had been uttered by a distinguished member of the legal profession. A profession which had, indeed, done much for the doctors, especially while having them on the stand as expert witnesses.

Dr. R. P. Wilson, Chairman of the Committee of Arrangements, presented a programme, recommending that the morning meetings commence at 9½ A. M., and the afternoon meetings at 2½ P. M., and extending invitations to attend an exhibition of the pupils of the Asylum for Feeble Minded Children, on Tuesday evening; a puplic address by Dr. N. S. Davis, on Wednesday evening, and at a later hour the same evening, a reception by Genl. and Mrs. Latham. The programme and invitations were accepted by a vote of the society.

The Secretary read a letter from Dr. E. Swisher, asking permission to withdraw from membership in the society, on account of having removed from the State. The request was granted, and on motion of Dr. T. D. Fitch, Dr. Swisher was unanimously elected an honorary member of the society.

The following were introduced by the Committee of Arrangements and took their seats as members by invitation: Drs. J. W. Downey, of Pekin; B. F. McMennany, of Bethany; A. C. Reno, of Albion; O. C. Reynolds, of Illinois; P. H. Oyler, of Mount Pulaski; A. H. Mersenback, of Illinois; Hosea Davis, of Littleton; Brooks R. Hamilton, of Nauvoo; J. J. Starkey, of Waynesville; A. D. Taylor, of Williamsville.

The list of standing and special committees was called, and special hours were designated when the report from each should be read. Volunteer papers were also called for and assigned to particular hours for being read and discussed.

The President, Dr. E. P. Cook, of Mendota, then delivered the annual address, which was listened to with great interest and attention. After its conclusion, the thanks of the society were tendered to the speaker. The recommendations were referred to a special committee, consisting of Drs. David Prince, G. W. Nesbitt, and H. Z. Gill, with instructions to report at this or the next annual meeting, as they might determine; and a copy of the address was requested for publication in the transactions of the society. The society then adjourned until 2½ P. M.

AFTERNOON SESSION.

At 2½ P. M., the members were called to order by the President, Dr. E. P. Cook, of Mendota.

Dr. D. Prince, of Jacksonville, read a short and interesting paper on the "Sanitation of Small Cities," which was received and referred to the Committee of Publication.

Dr. J. E. Owens, of Chicago, presented and read the report from the standing Committee on Surgery. It was listened to with interest and close attention, and was followed by a profitable discussion, in which Drs. E. Andrews, J. A. Walker, D. Prince, and J. H. Hulbert participated. (See remarks following the report.)

On motion of Dr. Prince the report was referred to the Committee of Publication.

Dr. Truesdell, of Rock Island, read an interesting paper on fractures of the femur, which was followed by remarks from Drs. D. Prince and H. Z. Gill. (See notes following the paper.)

On motion of Dr. Prince the paper was referred to the Committee of Publication.

Dr. J. H. Hollister called attention to the rule that all papers of more than fifteen pages of foolscap manuscript should be presented and read by abstract.

Dr. C. C. Hunt, of Dixon, presented the report of the standing Committee on Obstetrics, and read an abstract of the same.

On motion of Dr. E. Ingals the report was received and referred to the Committee of Publication.

Dr. S. J. Jones, of Chicago, presented and read the report of the Committee on Ophthalmology and Otology, which, on motion of Dr. E. Ingals, was received and referred to the Committee on Publication.

Dr. H. M. Lyman, of Chicago, read a paper on State Medicine, which was discussed to a limited extent by Drs. Hollister, Prince, Ingals, and Gill; and on motion of Dr. J. H. Hollister, was laid upon the table, to be taken up again at the pleasure of the society.

The meeting then adjourned until 9 A. M., the following morning.

WEDNESDAY MORNING, 9 A. M.

The members were called to order by the President, Dr. E. P. Cook, who announced the first order of business to be the appointment of the nominating committee.

A recess of ten minutes was taken to enable the members from each county represented to select one of their number to act on the committee.

On being called to order, the secretary read the names of those selected, as follows:

Committee on Nominations.—Drs. D. M. Slemmons, Woodford county; F. B. Waller, Fayette county; G. W. Albin, Cumberland county; A. C. Corr, Macoupin county; O. C. Reynolds, Christian county; A. C. Rankin, Iriquois county; W. E. Gilliland, Adams county; R. E. McVey, Morgan county; E. L. Herriott, Calhoun county; W. R. McKinzie, Randolph county; M. W. Walton, Stephenson county; C. Chenoweth, Macon county; C. C. Hunt, Lee county; H. Kelso, Ford county; A. T. Darrah, Champaign county; J. W. Newcomer, Menard county; G. W. Nesbitt, DeKalb county; T. M. Rogers, Wayne county; J. M. Armstrong, Madison county; H. Hatch, Pike county; W. J. Moore, Vermillion county; J. W. Fink, Montgomery county; H. Z. Gill, Jersey county; C. C. Allen, Brown county; B. M. Griffith, Sangamon county; W. West, St. Clair county; J. A. Walker, Mason county; J. J. Starkey, De Witt county; O. B. Hill, Peoria county; E. P. Cook, La Salle county; T. D. Fitch, Cook county; R. W. Crothers, Tazewell county; W. Hill, McLean county; N. S. Reed, Cass county; W. T. Kirk, Logan county; T. J. Maxwell, Henderson county; C. Truesdell, Rock Island county.

Dr. G. Wheeler Jones, of Danville, then presented and read the report of the Committee on Practical Medicine, which was listened to with marked attention, and referred to the Committee of Publication.

Chairman of the Committee of Arrangements read an invitation from Mrs. Col. Latham tendering the members of the State Medical Society a reception at her residence on Wednesday evening. On motion the invitation was accepted.

Dr. C. H. Norred read a paper on the Uses of Chloral and the Bromides in Obstetric Practice.

The paper was accepted and referred to the Committe of Publication.

Dr. E. Ingals, Chairman of the special Committee on Medical Education, read a report that was listened to with much interest.

The following resolutions were appended to the report:

Resolved, That the Illinois State Medical Society requests of all regular medical colleges, that they institute preliminary examinations for students who apply for admission to their classes, and only admit such as have, at least, a thorough English education.

Resolved, That the annual sessions of lectures by the regular faculties should not be of shorter duration than six months.

Resolved, That all students should be required to study medicine five years and attend three full annual sessions of lectures before they are admitted to examination for the degree of Doctor of Medicine.

On motion the report was accepted and referred to the Committee of Publication; and the resolutions were adopted, the first two unanimously, and the third with but few negative votes.

Short papers were presented and read by Drs. E. Andrews and E. L. Holmes, and referred to the Committee of Publication.

The society then adjourned until 2½ P. M.

AFTERNOON SESSION.

At 2:30 p.m. the Society was called to order by the President.

Dr. T. D. Fitch, of Chicago, read the report of the Committee on Gynæcology, which was received and referred to the Committee of Publication, without discussion.

Dr. T. F. Worrell, of Bloomington, chairman of the Committee on Necrology, stated that he had a report nearly completed, but it had been accidentally left at home. On motion, he was requested to complete his report and transmit it to the Committee of Publication.

Dr. Sarah Hacket Stevenson, of Chicago, read a paper on disorders of the Sympathetic Nervous System, illustrated by cases. The paper was discussed by Drs. Jewell and Stevenson, after which it was referred to the Committee of Publication.

Dr. H. Z. Gill, of Jerseyville, read his report as Special Committee on Croup; and also a short paper as supplementary to the report of the Committee on Surgery.

The report on croup was illustrated by two finely executed plates, showing the anatomy of the parts, which the writer requested permission to retain.

On motion of Dr. N. S. Davis, his request was granted, and both the report and paper were referred to the Committee of Publication.

Dr. Eli Brower, of Olney, chairman of the Special Committee to whom had been referred the communication on the subject of remuneration to medical witnesses in courts of justice, etc., at the last annual meeting, sent a full and interesting report, which was read by the Secretary and referred to the Committee of Publication.

Dr. J. H. Hollister, of Chicago, presented his annual report as treasurer of the Society. It had been duly audited, and was referred for publication.

Dr. B. M. Griffith, of Springfield, chairman of the Nominating Committee, made the following report:

To the President and Members of the Illinois State Medical Society,

GENTLEMEN:—Your Committee on Nominations met at the Lincoln House parlors at 12 m. to-day, all present except the President and Dr. N. S. Read. They beg leave to submit as the results of their deliberations, the following report, viz.:

For President, Ephraim Ingals, Chicago; 1st Vice-President, George Wheeler Jones, Danville; 2d Vice-President, C. C. Hunt, Dixon; Treasurer, John H. Hollister, Chicago; Assistant Secretary, Washington West, Belleville. Place of meeting, Belleville.

Committee of Arrangements.—T. B. Moore, Belleville; Washington West, Belleville; T. M. Armstrong, Madison county; Wm. R. McKenzie, Randolph county; H. Z. Gill, Jerseyville.

Committee on Practical Medicine.—W. S. Caldwell, Warren; F. B. Haller, Vandalia; I. S. Whitmire, Metamora.

Committee on Surgery.—W. Hill, Bloomington; A. C. Rankin, Loda; J. G. Harvey, Grove city.

Committee on Obstetrics.—G. W. Nesbitt, Sycamore; E. L. Harriott, Grafton; I. W. Fink, Hillsboro.

Committee on Gynæcology.—T. Davis Fitch, Chicago; J. Y. Campbell, Paxton; L. H. Corr, Carlinville.

Committee on Ophthalmology.—W. T. Montgomery, Chicago; J. M. Everett, Dixon; J. P. Johnson, Peoria.

Committee on Drugs and Medicines.—C. B. Johnson, Champaign; Jehu Little, Bloomington; Thos. Whitten, Irving.

Committee on Necrology.—T. F. Worrell, Bloomington; G. W. Albin, Neoga; E. Ingals, Chicago.

Vacancies in Judicial Council.—F. B. Haller, Vandalia; E. Ingals, Chicago; M. W. Walton, Ridott.

Committee on State Register.—E. P. Cook, Mendota; F. L. Matthews, Springfield; D. S. Boothe, Sparta.

Special Committees.—Croup: H. Z. Gill, Jerseyville; Diseases of Children: Chas. W. Earle, Chicago; M. W. Watton, Ridott.

Pelvic Cellulitis (Parametritis).—P. L. Dieffenbacher, Havana; Pneumonia: J. Maclay Armstrong; Antiseptic Surgery: Edwin Powell, Chicago; Abnormal Thermal Conditions in Diseases and the Means of Controlling them: J. H. Hollister, Chicago.

The following resolution was unanimously adopted by your committee, viz.:

Resolved, That hereafter the Illinois State Medical Society shall meet in Chicago every third year.

B. M. GRIFFITH, *Chairman.*

T. D. FITCH, *Secretary.*

The report was received, and Dr. J. H. Hollister moved to substitute Chicago for Belleville, as the place for the next annual meeting.

After some remarks from Drs. Waller, Rauch, Davis and Jewell, the motion was rejected.

The whole report except the appended resolution was then adopted.

A motion was made to lay the resolution on the table, which was carried.

The Secretary presented a communication from the Centennial Medical Society, concerning Weak, Impure and Adulterated Drugs, which was read and referred to the standing Committee on Drugs and Medicines.

Dr. W. West offered the following, which was unanimously adopted:

Resolved, That the Illinois State Medical Society regards with satisfaction and hearty approval, the efforts of Hon. Wm. R. Morrison to repeal the onerous duty on quinine.

Dr. D. Prince, of Jacksonville, presented the following report, which was adopted:

Resolved, As the sense of the Illinois State Medical Society that the forms of law adopted for estabishing a question of crime, are unsuited to the determination of a question of insanity, on account of the exposure to public curiosity and the supposed disgrace attending a trial by jury; and that this mode of procedure should be reserved for the cases in which it is requested by the parties who are suspected to be insane, or by the friends of such parties, and who are desirous of establishing by this means the mental soundness of the person in question.

Resolved, That the bill now pending in the Legislature of the State of Illinois, entitled An Act to revise the Law in Relation to Commitment and Detention of Lunatics, meets with the hearty approval of the Illinois State Medical Society. And that in the interests of humanity and for the credit of our own State, this Society respectfully prays that the Legislature now in session will speedily adopt the provisions of said bill as the law of our State.

David Prince,
H. Z. Gill,
G. W. Nesbitt, } *Committee.*

Dr. R. E. Starkweather moved that the secretary be directed to cause the foregoing resolutions to be presented to the Legislature without delay, which was adopted.

On motion the society adjourned until after the public address in the evening.

EVENING SESSION.

At 8 o'clock p. m., the hall in which the meetings had been held was filled by a reputable assembly of citizens, and Dr. N. S. Davis, of Chicago, delivered an address on the Nature of Medical Science and Art, and their Relations to the Important Interests of Society.

At the close of the address, Dr. E. P. Cook, President of the Society, took the chair and resumed the order of business.

Dr. G. W. Nesbitt, of Sycamore, offered a resolution favoring a law allowing physicians compensation for making returns of certificates of deaths, births, etc.

After some remarks in opposition by Drs. Davis, of Chicago, and Jones, of Jacksonville, and in favor by Dr. Lyman, of Chicago, the resolution was laid on the table.

On motion of Dr. T. D. Fitch, the Committee of Publication was directed to furnish all the medical periodicals, copies of the transactions of the Society, and if necessary, bind a sufficient number in paper for that purpose.

Dr. G. W. Nesbitt, of Sycamore, offered the following resolutions, which were adopted:

WHEREAS, In the opinion of the Illinois State Medical Society, many diseases are generated and propagated by the crowded and unventilated condition of our public school houses; therefore be it

Resolved, That a committee of three be appointed by the chairman of this Society, to memorialize the Legislature of the State of Illinois, at its next session, to enact a law establishing a board of commissioners of hygiene, consisting of the County Superintendent of Schools, County Surgeon, and one physician, in each county in this State, whose duty it shall be to inspect all public school houses, and see that they are supplied with proper means of ventilation, and are of sufficient size to accommodate the number of pupils in attendance; to inspect all proposed sites and plans of new school houses, and approve or reject the same; and to adopt such measures for the preservation of health in our public schools as from time to time they may think necessary and proper. Provided, that no measures so adopted shall conflict with the rights or duties of any local board or officer already established.

Resolved, That the committee so appointed to memorialize the Legislature be instructed to prepare a bill embodying the substance of the foregoing resolution, and present the same to this Society at its next session, for their approval, before introducing the same to the Legislature of the State.

The President appointed as a committee under the above resolution Drs. G. W. Nesbitt, of Sycamore, H. M. Lyman, and J. N. Rauch, of Chicago.

Dr. N. S. Davis offered the following resolutions, which were unanimously adopted:

Resolved, That the thanks of this Society are most cordially tendered to the Committee of Arrangements for the faithful and judicious manner in which they have provided accommodations for our present meeting.

Resolved, That the thanks of the Society are hereby tendered to Dr. C. L. Wilbur and the officers of the State institutions for the education and care of feeble minded children, for the very interesting exhibition of progress and excellence in management the members of the society had the pleasure of witnessing on Tuesday evening.

Resolved, That our thanks are also tendered to the profession and citizens of Lincoln generally, and to Col. and Mrs. Latham in particular, for the hospitality and elegant and enjoyable reception at the residence of the latter.

The following were appointed delegates to the American Medical Association, and the State Medical Societies: G. W. Frank, of Hillston; E. P. Cook, of Mendota; G. W. Nesbitt, of Sycamore; C. H. Norred, of Lincoln; Wm. Hill, of Bloomington; W. J. Moore, and G. W. Jones, of Danville; W. M. Chambers, of Charleston; C. C. Hunt, of Dixon; W. G. Cochran, of Fair City; C. Goodbrake, of Clinton; S. W. Stevenson, and T. D. Fitch, of Chicago; G. W. Albin, of Neoga; G. W. Newcomer, of Petersburg; E. Ingals, of Chicago; T. G. Maxwell, of Biggsville; E. L. Herriott, of Grafton; Saml. Milcher, of Cass Point; J. H. Hollister, of Chicago; Lucede H. Caxar, of Carlinville; G. F. Worrell, of Bloomington; D. Paine, of Jacksonville; R. L. Rea, of Chicago; L. L. Leeds, of Lincoln; R. E. Starkweather, Chicago; N. Wright, of Chatham; C. T. Wilbur, of Lincoln; E. Andrews, of Chicago; J. D. Bennett, of Assumption; J. R. Jones, of Lemoyle; E. L. Holmes, of Chicago.

Missouri State Medical Society.—Drs. E. L. Herriott, Grafton, and J. S. Williams, Otterville.

Indiana State Medical Society.—Drs. E. T. Pritchard, Georgetown, and S. H. Berry, Chicago.

Michigan State Medical Society.—Drs. E. Andrews, and S. J. Jones, Chicago.

Kentucky State Medical Society.—Dr. Wm. T. Kirk, Alton.

Wisconsin State Medical Society.—Drs. T. D. Fitch, J. S. Jewett, and R. L. Rea.

Iowa State Medical Society.—Dr. Thos. Gault, Ridott.

The business of the Society having been completed, the President, Dr. E. P. Cook, made some appropriate remarks, congratulating the members on the pleasantness and success of the session, and introduced the President elect, Dr. E. Ingals, of Chicago, who was received with hearty cheers. The Society then adjourned *sine die.*

N. S. DAVIS. *Per. Secretary.*

ARTICLE XI.

CHICAGO MEDICAL SOCIETY. Regular meeting May 5. Reported by ROSWELL PARK, M D. DR. ANDREWS, President, in the chair.

DR. F. C. HOTZ reported the following case of Traumatic Aneurism of the Eyelid: The doctor had performed an operation for trichiasis upon the upper lid of a young lady. For the purpose of transplanting the false eyelashes, an incision was made along the free edge of the lid. On the third day the sutures were removed, and the wounds were found to be healed by first union, except a small gap in the center of the free edge. Ten days after the operation, a profuse hæmorrhage occurred, the source of which proved to be a small aneurism protruding from that gap at the center of the edge of the lid. The aneurismal sac was excised, and pressure bandage applied. The wound then closed up by firm cicatrization.

DR. F. C. HOTZ also reported the case of chloroform asphyxia described in an article in the June number of the JOURNAL AND EXAMINER. In the discussion which followed this report, the President said he recollected an analogous case of an intemperate man with delirium tremens, who refused all food and medicine, and desperately resisted all attempts to administer either. He directed the administration of sufficient chloroform to at least render possible the exhibition of morphia. (This before the days of hypodermic medication.) The plan succeeded admirably, till suddenly respiration ceased, the usual symptoms supervened, and the patient died in spite of all efforts to resuscitate.

DR. HOLMES said that personally he had discontinued the use of chloroform some nine years ago, except in the case of young children, although his assistants often administered it. He had been unfortunate enough to have seven or eight deaths, from its use, on the table. It was now a number of years since he adopted the method of raising the feet as an aid to restoration of vitality. Alluding to the fact that sometimes alarming symptoms came like a shot, while at other times anæsthesia was almost completely recovered from before they were noticed, he thought it essential to safety to carefully watch these cases until complete consciousness had returned.

DR. BOGUE, during fourteen years' practice, had seen four cases die from the effects of chloroform; and each of them while it was being administered. He considered that in two cases of the four, death was simply inevitable from idiosyncrasy on the part of the patient; in the other two this was not so certainly the case. He was positive that in one case he observed cardiac pulsations for fully twenty minutes after cessation of respiration; artificial respiration was kept up as long as the pulse beat.

DR. F. H. DAVIS deemed it likely that in these cases of chloroform asphyxia it was as often a poisoning from carbonic dioxide on account of deficient æration of the blood, as from the pure paralysis of respiration caused simply by the chloroform.

DR. R. PARK alluded to the contrary statements laid before the students in the text books; one author stating that chloroform kills by paralyzing the cardiac centers, another that it paralyzes the respiratory centers; the former being the most common statement, but made with many modifications. He had learned of cases which justified each assertion, and wished that such contradictory statements might be either reconciled or modified. He referred to an admirable paper by Dr. Chisholm, of Baltimore, giving a concise account of the dangers from the use of chloroform, in which he enumerated them as follows. First, pure carelessness in administration, giving the vapor too strong, or not watching the patient attentively. Second, reflex spasm of the laryngeal apparatus causing strangulation; the remedy for which is simple. Third, inattention on the part of the one who administers the anæsthetic, and inadequate or improper means of administration. To use a thick towel saturated and folded around the face should be regarded as a criminal procedure. Fourth, the emesis caused frequently by anæsthetics has been more than once the real cause of death which was attributed to the latter; inasmuch as some of the contents of the stomach may be drawn from the pharynx into the trachea by violent inspiratory effort, if the patient be allowed to remain on his back. Hence the caution to turn the patient on the side as soon as there is the slightest sign of nausea. Fifth, failure to produce perfect and profound anæsthesia; since any condition short of this leaves the cardiac and respiratory centers exposed to inroads from peripheral irritation by which their function may be suddenly arrested. In this way may be accounted for those deaths that have occurred under anæsthesia for trivial operations, as well as those during more serious operations, where the timidity or anxiety of the surgeon causes him to stop the inhalation before the period of safety has been reached. Sixth, excessive administration; and seventh, the only legitimate and rarest cause of death from anæsthetics, that unknown condition called idiosyncrasy.

DR. PARK said he had ventured to give chloroform in cases of acute rheumatic endocarditis for the purpose of moving and cleansing the patient. He commended in the highest terms the method of administering the drug which he had learned from Dr. Bogue, of giving it drop by drop, from a dropping bottle, upon a single thickness of cloth held just in front of the patient's nose. This ensured free dilution of the vapor, and was, he thought, the nearest approach to perfect safety. In this way he had anæsthetized with two grams of the drug.

Alluding to the use of amyl nitrate with chloroform, he said he was now using it so, using about 1 part of the former to 300 parts of the latter. Judging from a few trials, he was inclined to think that more prostration and slower recovery followed the use of the mixture than the administration of the pure drug.

The discussion having terminated, DR. ANDREWS exhibited an oxalate of calcium calculus, about a line in diameter, which would have passed through the urethra without trouble, had not a congenital stricture of the meatus detained. It was readily removed by a simple incision and the obstruction to the flow of urine removed.

DR. F. H. DAVIS gave a brief account of a patient suffering from caries of the spine, who coughed up a little foreign body which was sent to him for examination. Under the microscope it exhibited the characteristics of true bone, and was doubtless discharged fram a carious bone into the lung by the destructive processes, whence it was expectorated without difficulty.

MEETING MAY 19, DR. ANDREWS, President, in the chair.

DR. ANDREWS read a paper entitled, "The Corn Doctor's Progress," which appears in this number. It was received with interest, but elicited no particular discussion.

CITRATE OF CAFFEIN AS A DIURETIC IN CARDIAC DROPSY. Shapter. (*Practitioner, Jan.,* '79.)

Professor Gubler first called attention to the diuretic properties of citrate or hydrobromate of caffein, in doses of 0.25 to 0.50, as inducing abundant and immediate diuresis in cases of cardiac dropsy, when given either subcutaneously or by the mouth. S. confirms this observation by the report of four cases, in each of which the flow of urine was more than doubled by its use.

The reporters experience with it leads him to assign to it a special position as a cardiac diuretic in those cases of cardiac disorder where muscular embarrassment and neurosal incöordinate cardiac action (the indications of progressive mural decay) clinically forbid the administration of "tonic" doses of digitalis which may relieve the stagnating pressure of venous blood in the right side of the heart.

According to Binz, caffein is a diuretic or excitor of venal secretion, and it increases the heart's action either by direct stimulation to the organ itself, or by the arteries which it excites to contraction.

Practically, then, where a dilated, feeble heart contracts irregularly and is undergoing progressive mural degeneration, and where dropsy as the result is the most obvious symptom, S. recommends the above salt as the very best remedy offered

Foreign Correspondence.

ARTICLE XII.

MEDICAL SOCIETIES IN LONDON. — DISCUSSION ON CROUP AND DIPHTHERIA. — BARNES ON THE USE OF FORCEPS IN FIRST STAGE OF LABOR. — OWEN ON CLEFT PALATE. — THORNTON ON DRAINAGE OF THE ABDOMINAL CAVITY.

LONDON, May 21, 1879.

Through the great courtesy shown me by the medical men whom I have met, it has been my privilege to be present during the sessions of several medical societies here, and to listen to the discussions upon several very important questions of practice, by the most noted men of the profession.

Most of these societies meet in the same room on Berners st.; the Pathological, the Medico-Chirurgical, the Obstetrical, and the Clinical, have their home in this hall. It is very comfortably fitted up, and ornamented with marble busts of departed presidents, so that the visitor's eye can wander over the features of the great and good men who accumulated the wealth of the past in the art of medicine and surgery, at the same time the visitor can sit near by and listen to the words of these other illustrious men who are busily investigating the facts of the present. The walls of the main rooms are crowded with books of every character, on all conceivable subjects, full doubtless of the ore into which the reader must delve and dig ere the crucible can contain the pure gold which lies at the bottom of the literary smelt. If man's ills and afflictions are in proportion to the books written about him, there should be no health in him, from the crown of his head to the soles of his feet. The books are kept well, and nicely and methodically arranged for reference. I admired, above all things, the evident determination to provide for the physical comfort of the members, by keeping everything neat and cosy. Best of all was the jolly social seance after the discussion, over a cup of coffee and a sandwich. The closing hour is ten o'clock, and about that time the tempting aroma from the steaming cups floats through the rooms, tickling the nostrils and stimulating the salivaries. 'What man could be mean enough to continue to speak in the midst of all this, even if he were wound up? It constitutes the gentlest and most seductive hint imaginable to discontinue a paper or discussion.

The cordiality with which strangers are received is beyond all praise. After the names have been presented to the president, by the secretary, the former officer formally welcomes them into the society as members for that session, and they are entitled to all the privileges of Fellows; clear through to coffee. One is made to feel at home; what more could be done? I have heard a good deal said about English exclusiveness and coldness. I don't believe a true English gentleman has any such attribute belonging to him, they are the most generous, the most charmingly hospitable people one can ever meet in the way of accommodation and good will. The only thing is to get right down to this deep stratum and be worthy of it.

They don't like prosy discussions at these meetings; if any unfortunate indulges in a "class meeting" experience, without very much direct application to the subject in hand, the rather cold-blooded shuffling of feet places the icy grasp of death upon his flow of eloquence or otherwise, and he is thankful for the opportunity to resume his seat. The bane of all medical societies has not been entirely eliminated in these well regulated assemblies. It is truly marvellous how speakers with "wonderful" cases, still more wonderfully *àpropos*, will spring up in every discussion imaginable, and I presume in all quarters of the globe. Then, too, it is just as usual to find what I am loath to call the orchestrion of medical debates. This instrument, you must know, is a good sized box containing a brass band (40 pieces), an organ, a bagpipe, etc., so arranged that by the touch of a spring and the turn of a crank, one can revel in the master pieces of Bethoven, Straus, Handel et al., without worry or an expenditure of guineas. Now, these medical "orchestrions" are good things to have on hand when there is nothing to do but to listen to words without end. When one desires to learn the curt experiences of thinking men on vital issues, they are fearfully exasperating. A speech of an hour thus yields but a minute's gist. Perhaps such discussions are too much impromptu in their character to allow of generalization. I do not know that they can be changed for the better. When a man talks rather well and readily, he is about as apt to know of his talent as any one else, and it is certainly hard to ask him to hide that which he owns under a bushel. So let us be generous; ramble on, sweet talkers, you amuse if you do not interest.

The debate on the similarity or non-similarity, pathologically, of membranous croup and diphtheria, grew out of the report of a committee of the ablest men in the profession, appointed some time ago, to inquire into those important questions. It was held at the sessions of the Medico-Chirurgical Society, and such men as Dr. Johnson, Mr. Parker, Mr. Semple, Sir Wm. Gull, Sir Wm. Jenner, Mr. Jonathan Hutchinson and Mr. Wilks took part in the discussion upon the report. In the main the illustrious speakers evinced the usual proclivity to "agree to disagree," some showing a marked tendency to do more of the latter than the former. A full report of the remarks made can be found in the *Lancet* of April 26th and May 3d and 17th. There seems to be a growing tendency to admit a close relationship between the two maladies even by men who have hitherto held valiantly to the belief that they were totally distinct and separate from each other.

The principal element of disagreement came from such men as Mr. Jonathan Hutchinson and Dr. Wilks. The sum of Mr. Hutchinson's remarks are embraced in these inquiries: "Is there any *bona fide* and sound reason for speaking of diphtheria as a specific fever? Is it not much more probable that the diphtheritic false membrane may arize from *ordinary causes* of *inflammation*, and that it becomes itself contagious?" It had no period of incubation. He was inclined to believe with Sir John Cormack, heading his lectures "croup, a symptom; diphtheria, a disease." This idea of the ordinary origin of diphtheria and its auto-inoculability was moderately acquiesced in by Sir Wm. Gull, a man whose *sang froid* is absolutely inimitable. It was rather startling to hear him say that the results of his experience had forced him to the belief that many of these cases were benefited by resort to the discarded mercurial treatment. If I remember aright, just before I left home, an article was going the rounds of the journals, in which a practitioner in the Eastern States claimed to cure all his cases by 02.5 Gm. doses of calomel. I hope it will please him to know that he has good authority at his back. Sir Wm. Jenner could find no ground upon which to rest his feet except that furnished by the assumption that both affections were "*one and the same.*" Mr. Semple stands on this ground, and Dr. Johnson finds all other very slippery.

As the conclusions of the committee may interest you, I send them.

1. Membranous inflammation confined to, or chiefly affecting the larynx and trachea, may arise from a variety of causes, as follows:

(*a.*)—From diphtheritic contagion.

(*b.*)—By means of foul water or foul air, or other agents such as are commonly concerned in the generation or transmission of zymotic disease (though whether as mere carriers of disease cannot be determined).

(*c.*)—As an accompaniment of measles, scarlatina or typhoid, being associated with these diseases independently of any ascertainable exposure to the special diphtheritic infection.

(*d.*)—It is stated on apparently conclusive evidence, although the committee have not had an opportunity in any instance of examining the membrane in question, that membranous inflammation of the larynx and trachea may be produced by various accidental causes of irritation, the inhalation of hot water or steam, the contact of acid, the presence of a foreign body in the larynx and a *cut throat.*

2. There is evidence in cases which have fallen under the observation of members of the committee and are mentioned in the tables appended, that membranous affection of the larynx and trachea has shortly followed exposure to cold, but their knowledge of the individual cases is not sufficient to exclude the

possible intervention or co-existence of other causes. The majority of cases of croupal symptoms definitely traceable to cold, appear to be of the nature of laryngeal catarrh.

3. Membranous inflammation, chiefly of the larynx and trachea, to which the term "membranous croup" would commonly be applied, may be imparted by an influence, epidemic or of other sort, which has in other persons produced *pharyngeal* diphtheria.

4. And conversely, a person suffering with the membranous affection chiefly of the air passages, such as would commonly be termed membranous croup, may communicate to another a membranous condition limited to the pharynx and tonsils, which will be commonly regarded as diphtheritic. * * * The membrane, even when chiefly laryngeal, is more often than not associated with some extent of a similar change in the pharynx or on the tonsils; and whether we have regard to the construction of the membrane, or to the constitutional state, as evinced by the presence of albumen in the urine, it is not practicable to show an absolute line of demarcation (save what depends upon the position of the membrane) between the pharyngeal and laryngeal forms of the disease.

The facts before the committee only warrant them in the view, that when it obviously occurs from a zymotic cause or distinct infection and primarily affects the pharynx, constitutional depression is more marked, and albuminuria more often and more largely present; though in both conditions some albumen in the urine is more frequently present than absent. The committee suggest that the term *croup* be henceforth used wholly as a clinical definition implying laryngeal obstruction, occurring with febrile symptoms in children. Thus croup may be membranous or not membranous, due to diphtheria or not so.

The term *diphtheria* is the anatomical definition of a zymotic disease which may or may not be attended with croup."

The report certainly covers enough ground to warrant the prolonged discussion which it awakened and which is not yet finished. The opinions expressed cannot fail to be very interesting and full of valuable information. The subject of treatment was scarcely alluded to by any one but Sir Wm. Gull; between the mercurials suggested by him and the alcohol insisted upon by Dr. Chapman, of the States, no doubt lies the safety, and perhaps restoration to health of the sorely afflicted.

I heard the commencement of a very interesting discussion at the meeting of the Obstetrical Society, on the use of the forceps in the first stages of labors, in "lingering" and "tedious" cases. The debate was opened by the renowned Dr. Barnes, and his address was marked by his usual perspicuity and wisdom. I am sorry that I have not the space to send you his conclusions. Suffice it to say that he justified their use in preference to *ergot* or *waiting*, in the specified cases of no recognizable obstruction and purely "lingering" character.

I was somewhat amused to hear Mr. Thorburn, of Manchester, describe his efforts to make the English answer as well as the American forceps for purposes of delivery. He told how he had been compelled to resort to considerable mechanical ingenuity in the fitting of screws in the handles, etc., to increase their compressive power and prehensile capacity. The idea never seemed to enter his head that it would have been much simpler and easier to have used the American forceps at once — the natural sequence of their acknowledged superiority. One gentleman certainly displayed praiseworthy courage in reporting the results of ten years' practice in midwifery. As the reports of the society in the *Lancet*, May 17th, contain these statistics as furnished, I can properly refer to them. It is certainly an astounding record of "still births," in part acknowledged as being attributable to the use of ergot. If any one is ever justified in blindly accepting a dictum, these statistics surely suggest that the one which follows, should be written upon the walls of every obstetrical theater; "never use ergot in the parturient chamber until the womb is emptied of its contents."

One of the newest and to me most interesting works to which attention has been called, is in the line of dentistry, and done by an American, Dr. W. F. Thompson, formerly of Chicago. Teeth are removed, kept out of the mouth, well covered in warm absorbent cotton, sufficiently long to fill the largest cavity, or even to build up an entire crown of gold, and then returned to their proper cavity in the jaw. I have seen the cases and know that the tooth has become as fast and as useful as any. The operation is only applicable to such teeth as cannot be treated in the mouth, owing to the extent of decay. The success seems to follow great care in cleansing the tooth socket of blood clots, maintaining at a certain degree the warmth of the tooth, and above all, providing for drainage of the socket for a few days after the tooth is replaced. This is accomplished by using a rather thick-walled gold tube introduced to the bottom of the tooth cavity, around which the filling is fixed. After the tube has acccomplished its purpose and the tooth become fastened and free from tenderness, the tube is closed. The latter is peculiarly the doctor's own method.

A visit to the Harveian Society gave me the pleasure of listening to a splendid paper on cleft palate, read by Mr. E. Owen. It was exceedingly well written and full of interest. The doctor concludes that the operation is followed by the most successful results if done about the third year of life. If the cleft is complete, it is best done in three stages. 1st, close the hare-lip, and this is followed by some contraction of the opening in the hard palate. 2d, close the fissure in the soft palate, this again is succeeded by still more diminution of the size of the opening in the bony portion. 3d, operate for the closure of the opening in the hard palate. Anæsthetics should be used in all cases, and Mr. Smith's gag is the best one he has ever employed for keeping the jaws well open. He has avoided all hæmorrhage in the final division of the muscles of the soft palate successfully, by making the section with the small slender point of Pacquelin's thermo-cautery. The greatest of care must be taken of the little patients after the operation, to amuse them just to the point short of laughing, and to carefully keep them above the worry which might end in crying. Rest, absolute and perfect, of the parts operated upon must be sedulously sought after and secured. They should be schooled somewhat to the confinement necessary after the operation for several days previous to its performance.

The subject of greatest interest to me at this meeting was treated of in the paper read by Mr. Knowsley Thornton, surgeon to the Samaritan Hospital for Women, on drainage in abdominal surgery. The deductions and conclusions were based mainly upon cases of ovarian tumor, but are, as claimed by Mr. T., of universal application to all cutting involving the abdominal walls. Mr. Thornton has evidently gone through two stages of belief with reference to the usefulness of drainage in these cases, and is now emerging upon a third. 1st. Drainage seemed to give the very best of results, when a bad case or so, explainable apparently only on the ground of harmful irritation arising from the tube itself, led him to dispense with it. 2d. Quite a number of successful cases without any drainage whatever, after rather formidable operations, have led him to his present impression that with truly honest and efficient antiseptic operations, the cases requiring any drainage whatever will be very few indeed. A well closed abdominal wall after the operation is, in his mind, the safest condition for the patient to be in—a rule with few exceptions. He insists on the absolute necessity of using antiseptics, and his great experience make his utterances authoritative. Mr. Thornton is a very lucid, earnest writer, and close thinker. With over one hundred cases done by himself, with an unusually small mortality, and these added to his careful deduction, from the hundreds of cases in which he has been Mr. Spencer Wells' main and only assistant, the results of his experience are most valuable to the profession.

His readiness as an operator, his mastery of the pathology of the entire subject, his wealth of clinical study and observation, prognosticate for him a position in this field of valuable labor, unsurpassed by any who have worked in it in the past or whose labors are devoted to it in the present. If I felt at liberty so to do, I could give you an instance of the man's coolness, courage and readiness of resource under trying circumstances, which would convince you that he has already reached a climax beyond which it is impossible for any man to be taxed.

I have been intending to write you a letter about the ovariotomies I have seen while in London, but Mr. Thornton and his colleague, Dr. Bantock, do the operation so perfectly and with such elegance that I do not dare to make the attempt until I feel myself more securely grounded. Their skill of operating is only surpassed by the watchful care given to any case until recovery is insured. I will write more thereon some other time.

Following the beaten track, I have spent a few stray hours in Westminster Abbey, only to be disgusted at the neglect heaped upon the medical profession. A forest of monuments fill its naves and chapels erected to soldiers and sailors, from the foretop-man to the commodore, from the corporal to the Iron Duke. Preachers are built up in marbled abundance, poets are chiseled in solid verse, lawyers are briefly done in stone, but the doctors are nowhere. This almost leads one to believe that doctors are the only people who do not die in this country. Among other things noticed (under this oldest of roofs), was a piece of marble in wretched repair; it was labelled, "to the memory of an honest man." Even he died.

It is susceptible of proof that doctors do not kill any more people than soldiers. They certainly ought to receive acknowledgment of what is accomplished; especially, as what *is* done in that way, is done with much less noise than that made by the red coats.

More courage, self-sacrificing promptitude of action, generosity of spirit, true manliness and honesty are displayed every day in these streets by professional men in their ordinary rounds of duty than was ever thought of by so-called geniuses that have chimed a "well told tale," or fought a "hard won battle."

Poets as often sicken the mind as doctors do the body; then why a poet's corner while the doctor's surgery is passed by in silence? Here is a widely opened field for the famed English "fair play" to work wonders. The only name I saw here followed by the title of doctor, was that of Oliver Goldsmith, but as he, so far as I know, is only noted in a medical way for having held a learned and convincing conversation with Boswell on the movements of the upper jaw in the process of mastication. Good man as he was, it is hardly fair to make him the representative among the dead of the profession which has to do with the science and art of medicine and surgery. I do not expect to be found resting in Westminster Abbey in the future, unless this wretchedly prolix letter entitles me to a slab.

C. T. Parkes.

Domestic Correspondence.

ARTICLE XIII.

CHICAGO, Ill., June 18, 1879.

To the Editors of THE CHICAGO MEDICAL JOURNAL AND EXAMINER,

Gentlemen:—That I may reply explicitly to the communication of Dr. Robert Barnes, which appeared in your last number, permit me to introduce his letter in full:

> LONDON, 15 HARLEY STREET, W., May 3, 1879.
>
> *To the Editor of* THE CHICAGO MEDICAL JOURNAL AND EXAMINER,
>
> *Sir:*—My attention has been called to an article in your issue of March last on Emmet's Operation," by Dr. E. C. Dudley, in which occurs the following passage: "Either from absolute ignorance, or from profound prejudice, or from a carelessness which in the law would amount to malice, the most exhaustive gynæcological works in England (Barnes), France (Leblond), and Germany (Hegar, Kaltenbach, Schrœder) are absolutely silent."
>
> "Big words!" It is not my affair to inquire how far they may be justly applied to Leblond, Hegar, Kaltenbach and Schrœder. As to me they possibly might be applied, *if the allegation were only true* that I had been "absolutely silent" about "Emmet's operation." But as a matter of fact I have mentioned it, and with the unqualified respect which I entertain for one of the most able and illustrious of my American friends. At page 873, 2d edtiion of my "Diseases of Women," 1878, I give a compendious summary of Emmet's operation, quoting the source (*American Journal of Obstetrics*, 1874), and I conclude with the following appreciation: "I can confirm the accuracy of Emmet's views. I have performed his operation with satisfactory results."
>
> So if there is "absolute ignorance" it is not mine: if there is "profound prejudice," it is not mine; and if there is "carelessness amounting to malice," it is not mine. It is possible that Dr. Dudley is misled by copying a similar impeachment made against me by Dr. Paul Mundé, in the *American Journal of Obstetrics*, instead of reading my book for himself. Dr. Mundé has since apologized to me for his error. Dr. Dudley

will no doubt do the same. As I am entitled to damages I claim the right to fix the penalty. I condemn him to read my book, and caution him never again to accept statements at second hand. I am, sir, yours sincerely,
ROBERT BARNES.

The following is a quotation in full of all that is contained in the last edition of Dr. Barnes' book on the subject of laceration of the cervix:

"Emmet calls attention to the frequency of the laceration of the cervix, and to the serious distress they entail. (*Am. Jour. of Obst.*, 1874). They are most frequent, he says, in the median line, and more frequent in the anterior than in the posterior lip. If in the median line and confined to the cervix, they generally heal rapidly. But when the laceration extends through the vesico-vaginal septum a fistula may result; and this part of the rent may not heal. Lacerations through the posterior lip also heal rapidly; but sometimes when they extend far back, inflammation may arise, and *cause* an intractable form of retroversion. A cicatricial band is left, which must be removed before relief is obtained. But it is the lateral lacerations with which we are chiefly concerned in practice. Whenever the laceration has extended to the vaginal junction or beyond, there exists a tendency for the tissue to roll out from within the cervical canal. Hypertrophy and cystic degeneration of the lips ensue; involution is arrested, partial obliquity of the uterus is produced. On getting about, the woman is soon the subject of great distress; leucorrhœa, menorrhagia, dysmenorrhœa, difficulty in walking impel her to consult her physician. The attendant abrasion, glandular inflammation, hypertrophy, leucorrhœa are readily recognized, and many such cases are treated for ulceration ineffectually for months. Emmet has successfully treated more than two hundred such cases by paring the edges of the fissure, and uniting them by silver sutures, so restoring the cervix to its normal shape. I can confirm the accuracy of Emmet's views. I have performed his operation with satisfactory results."

It will be observed that Dr. Barnes devotes about one-half of a page to one of the most important, if not the most important, subject treated in his book, and about an entire page to making good his defense against the charge of absolute silence.

When the last edition appeared, I examined it carefully with special reference to laceration of the cervix, but failed to find anything. I am, therefore, unable to profit by the explanation charitably offered by Dr. Barnes, that I was misled by the similar error of Dr. Mundé, nor is it certain that Dr. Barnes does himself justice in presenting his book to be read as a penance. I read it with pleasure.

Had I been alone in failing to discover that Dr. Barnes "mentioned" this subject, such a failure might perhaps be attributed to gross carelessness, but Dr. Barnes says that the editor of the *American Journal of Obstetrics* did the same thing. Others might be mentioned, of whom one enjoys a degree of eminence not unequal to that of Dr. Emmet himself. The following is from Emmet's book.

> "As soon as the practitioner becomes able to recognize this lesion under its different forms, he will be surprised to find a new explanation of all his cases of elongated or hypertrophied cervix, as well as for those of ulceration. * * * * * let any one once master the diagnosis and he will not fail to recognize the protean nature of lacerations, * * * * he will never have occasion afterwards to amputate the cervix, or any portion of it, except for malignant diseases."

Dr. Barnes, on subinvolution, hypertrophy of the cervix, cystic degeneration, "ulceration," and granular erosion, utterly ignores laceration as a cause, although it is generally the cause. His plates also (figures, 101, 103, 117, 119, 120, 121, 122) used to illustrate the so-called hypertrophied cervix, are excellent illustrations of laceration.

It is unfortunate that such plates are employed for such a purpose. In the treatment of this supposed hypertrophy and elongation amputation is sometimes advised, although for several years it has been demonstrated in the Woman's Hospital at New York and elsewhere, that these conditions may be entirely removed by suture. In the index may be found the words, *Cervix Uteri, injures to, in labor*, page 426. Here follow five pages in which laceration of the cervix is not "mentioned;" but two cuts are introduced, which whould admirably serve to illustrate the subject in a future edition.

Having failed to discover any mention of laceration, under diseases of the cervix and fundus uteri, and under injury to the cervix during labor, I supposed the author to have been "absolutely silent;" but had it occurred to me to look carefully under diseases of the vagina (which I confess it did not) I should have found a short paragraph, an abstract of one of Emmet's Memoirs, already quoted above, wedged in between sloughing of the vagina on one side and vesico-vaginal fistula on the other. It is difficult to imagine that any one not familiar with the subject would gain even a suspicion of its importance by reading this paragraph. I now substitute for "*absolutely silent,*" *practically silent.*

It is a principle of the law, that when one of two parties engaged in a dispute must suffer, that one shall suffer who by his voluntary act has made it possible for the dispute to arise. Since Dr. Barnes, by his voluntary act, has rendered possible this dispute, I am clearly the aggrieved party and he is the culprit. I desire to fix the penalty.

Dr. Barnes will overlook my oversight and that of Dr. Mundé, and publish an improved edition of his very valuable work immediately.

E. C. DUDLEY.

CUPRUM AMMONIATUM IN NEURALGIA OF THE FIFTH (*Bulletin de l'Académie de Médecine.*) (Seance of 1st April, 1879. By Dr. Féréol.) Dr. Féréol has obtained marked and sometimes instantaneous relief from the exhibition of cuprum ammoniatum, in obstinate cases of neuralgia of the fifth pair of nerves. He does not claim to have found an infallible remedy, but modestly asks for it a trial in this troublesome affection. In one or two of the cases the patients who were relieved had, previous to its administration been deprived of sleep for weeks. The commencing dose should vary from Gr. 0.10 to 0.15 a day, gradually increased to Gr. 0.30 or even 0.50, carefully watching the susceptibility of each individual. It is best administered in pills or capsules, and the daily amount above indicated should be divided into eight or ten parts, to be taken at intervals preferably with food. It is important to continue the treatment for twelve or fifteen days after the cessation of pain.

AMYL NITRATE A CARDIAC STIMULANT.—There is an accumulation of evidence that this drug is a prompt and valuable stimulant. Where a rapid action is desired, it has no equal. Even when inhaled in two-gram and four-gram doses, it has never done harm. Physicians should overcome their fear in this regard.

Editorial.

ARTICLE XIV.

CHANGES IN THE EDITORIAL STAFF OF THIS JOURNAL.

With the present number begins the thirty-ninth volume of the CHICAGO MEDICAL JOURNAL AND EXAMINER. It will be seen that a change has been effected in the editorial staff, one of those changes which were contemplated when this publication became the property of the Chicago Medical Press Association. It was then designed to secure such flexibility in the editorial management, that the journal might, as far as possible, remain a representative of the medical profession of Chicago, and that changes in the corps of editors might not affect either its character or influence.

We are called upon to write at once a valedictory and a salutatory. Dr. F. C. Hotz and Dr. E. F. Ingals retire from connection with the editorial management, voluntarily and after much effort upon our part to secure their services for the future. Both of these gentlemen are burdened with duties which will hereafter prevent their devoting time to the labor involved in editing and publishing a work of this character. To both of them, the readers and subscribers of this journal are greatly indebted, for their excellent and efficient co-operation. It is unnecessary to say that they have also largely contributed to that spirit of harmony and good feeling which has from the first characterized our journalistic labors with them. They resign to carry with them the regrets and best wishes of their confrères in the editorial staff.

One vacancy, thus created, is filled by Dr. N. S. Davis, Dean of the Faculty of the Chicago Medical College, a gentleman who certainly needs no introduction to the medical profession of this country or to our colleagues of the medical press. Veteran editor and author, he comes to us as one who returns to a familiar field. Dr. Davis has been in turn editor of each of the two periodicals whose union gave birth to the present JOURNAL AND EXAMINER. He will be welcomed to his new position by his many friends throughout the country, and his associates congratulate themselves, as well as the readers of these pages, upon the strength which is thus added to their organization.

Dr. D. R. Brower, one of the faculty of the Woman's hospital Medical College of Chicago, succeeds to the charge of the publication department of this journal. Dr. Brower has been for some time associated in the work of this department and will bring to it the fruit of his extended experience. There will be no change in the address of the publication in consequence of this transfer, as all communications should continue to be sent, as heretofore, to No. 188 S. Clark St., Chicago, where are the rooms of the Press Association.

It should be added that the prospects of this periodical were never brighter than at present. We commence the present volume with a full subscription-list, free from all indebtedness, and with a handsome balance in bank. The conduct of this journal has been such in the past as to demonstrate the fact that a thoroughly independent and non-partisan sheet, whose sole aim is the advancement of the interests of science and scientific men the world over, not only deserves the support of such men, but receives it in such manner as to achieve financial success. It only remains for us to say that no pains will be spared in the future to render these pages valuable to the student, the practitioner, the author and the teacher of medicine.

A GERMAN physician wanted for a thriving Nebraska city. A most excellent opportunity for a German physician, well educated and of good habits. His statements must be reliably substantiated. Address for particulars Dr. A. S. V. Mansfelde, Secretary of Nebraska State Medical Society, Ashland, Nebraska.

BOOKS AND PAMPHLETS RECEIVED.

Lecture on Electricity in its Relation to Medicine and Surgery. By A. D. Rockwell, A.M., M.D. Cl., pp. 99. 1879. New York: W. Wood & Co. Chicago: W. T. Keener.

The Twelfth Annual Report of the Health Department of the Honorable Common Council of the City of Cincinnati, for the year ending Dec. 31, 1879.

The Seventh Annual Report of the State Board of Health of Minnesota, Jan., 1879.

Posological Tables, including all the Officinal and Most Frequently Employed Unofficinal Preparations. By Chas. Rice. Cl., pp. 95. 1879. New York: Wm. Wood & Co. Chicago: W. T. Keener.

Ophthalmic Out-Patient Practice. By Chas. Higgins, F.R.C.S. Second edition. Cl., pp. 116. 1879. Philadelphia: Lindsay & Blakiston. Chicago: Jansen, McClurg & Co.

Diseases of the Throat and Nasal Passages — A Guide to the Diagnosis and Treatment of Affections of the Pharynx and Œsophagus, Trachea, Larynx and Nares. By J. S. Cohen. Second edition, revised and amended. Cl., pp. 42. 1879. New York: Wm. Wood & Co. Chicago: W. T. Keener.

The Laws of Therapeutics: or The Science and Art of Medicine. By Jos. Kidd, M.D Cl., pp. 196. Philadelphia: Lindsay & Blakiston. Chicago: Jansen, McClurg & Co.

Handbook of Diagnosis and Treatment of Diseases of the Throat and Nasal Cavities. By Car. Seiler. Cl., pp. 156. 1879. Philadelphia: H. C. Lea. Chicago: Jansen, McClurg & Co.

Hearing and How to Keep it. By Chas. H. Burnett, M.D. 1879. Cl., pp. 152. Philadelphia: Lindsay & Blakiston. Chicago: Jansen, McClurg & Co.

Fistula, Hæmorrhoids, Painful Ulcer, Stricture, Prolapsus and Other Diseases of the Rectum: Their Diagnosis and Treatment. By Wm. Arlingham. Third edition, partly rewritten. Cl., pp. 325, 1879. Philadelphia: Lindsay & Blakiston. Chicago: Jansen, McClurg & Co.

Transactions of the American Gynæcological Society. Vol. III, for the year 1878. Cl., pp. 472. Boston: Houghton, Osgood & Co. Chicago: Jansen, McClurg & Co.

Diseases of the Intestines. By John S. Bristowe, M.D., J. R. Wardell, M.D., J. W. Bigbie, M.D., S. O. Habershon, T. B. Curling, F.R.S., and W. H. Ransom, M.D. Cl., pp. 243. 1879. New York: Wm. Wood & Co.

Minutes of the Medical Society of the County of New York, 1806 to 1878. Edited by A. E. M. Purdy, M.D. May. Part II.

Seventh Annual Report of the Secretary of State of the State of Michigan, relating to the Register and Return of Births, Marriages, and Deaths for the year 1873. Lansing, Mich.

Atlas of Histology. By E. Klein, M.D., F.R.S., and E. Noble Smith, F.R.C.P., M.R.C.S. Parts I, II and III. Philadelphia: J. B. Lippincott & Co. Chicago: W. T. Keener.

Bibliotheca Dermatologica, Catalogue of Cutaneous Literature in the Library of H. G. Piffard, M.D.

Alternating Anterior and Posterior Version of the Uterus. By S. C. Bussy, M.D. Reprint from Vol. III, Gynæcological Transactions.

Address on State Medicine and Medical Organization. By Stanford A. Chaille, A.M., M.D.

Minutes of the Meeting of Organization and Proceedings of the Sanitary Council of the Mississippi Valley.

Further Contributions to the Treatment of Lupus. By Henry G. Piffard. Reprint from *Med. Record*, April 5, 1879.

On Spasmodic Stricture of the Urethra. A Reply to D. F. N. Otis. By H. B. Sands, M.D.

Transactions of the American Dental Association, commencing Aug. 6, 1878.

The Perihelia Crisis. By Richard Mansil, Rock Island, Ills.

Seventh Registration Report Concerning Vital Statistics of Michigan. General Remarks and Statements.

Other Symptoms of Nervous Exhaustion. By G. M. Beard, A.M., M.D. Reprint from the *Journal of Nervous and Mental Diseases*, April, 1879.

Conclusions from the Study of One Hundred and Twenty-five Cases of Writer's Cramp and Allied Affections. By G. M. Beard, M.D. Reprint from *Med. Record*, March 15, 1879.

DR. TILBURY FOX, of London, is dead. He was the author of a treatise on skin diseases which made his name known to many Americans, and whose merits certainly gained for its author a deserved eminence. Dr. Fox's death will be deeply felt by his large circle of warm friends.

Items.

LIST OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE.—*Surgeon-General*—John O. Hamilton, Washington, D. C. *Surgeons*—E. Hebersmith, San Francisco, Cal.; C. N. Ellinwood, New York; P. H. Bailhache, Baltimore, Md.; John Vansant, Boston, Mass.; Wm. H. H. Hutton, New Orleans, La.; T. W. Miller, Chicago, Ill.; W. H. Long, Louisville, Ky.; Walter Wyman, St. Louis, Mo.; J. A. Brown, Detroit, Mich.; R. D. Murray, ordered to Norfolk, Va.; C. S. D. Fessenden, Portland, Me,; George Purviance, Pittsburg, Pa.; H. W. Sawtelle, Norfolk, Va.; E. J. Doering, Philadelphia, Pa. *Assistant Surgeons*—H. W. Austin, Key West, Fla.; Henry Smith, Galveston, Tex.; Jas. M. Gassaway, Pt. Townsend, W. T.; Geo. W. Stoner, Buffalo, N. Y.; J. C. Fisher, Cairo, Ill.; John Godfrey, Mobile, Ala.; F. H. Brown, Boston, Mass.; C. B. Goldsborough, Baltimore, Md.; Robt. White, on Rev. Str. "*Rush*"; H. M. Keyes, Cincinnati, O.; Geo. H. Stone, Savannah, Ga.; Proctor Thayer, Cleveland, O.; Fairfax Irwin, Chicago, Ill.; W. C. W. Glazier, N. Y.; Frank W. Mead, San Francisco, Cal.; Chas. L. Dana, (N. Y.) New York (temp'y);. H. P. Cooke, (Va.) New Orleans, La.; H. R. Carter, (Md.) Boston, Mass. (temp'y); W. H. Heath, (Pa.) Washington, D. C. *Acting Assistant Surgeons*—J. H. O'Reilly, Evansville, Ind.; F. J. O'Connor, St. Louis, Mo.; F. D. Porter, Detroit, Mich.; A. C. Hamlin, Bangor, Me.; R. D. Bibber, Bath, Me.; Elmer Small, Belfast, Me.; K. H. Swett, Ellsworth, Me.; S. B. Hunter, Machias, Me.; Wm. A. Banks, Waldoboro', Me.; W. D. Stewart, Tuckerton, N. J.; H. G. Bates, New Berne, N. C.; Thos. F. Wood, Wilmington, N. C.; Jas. M. Allen, Milwaukee,

Wis.; K. S. Taft, Marquette, Mich.; Byron De Witt, Oswego, N. Y.; J. H. Van Deman, Chattanooga, Tenn.; Wm. M. Griffiths, Louisville, Ky. It will be seen in the above list, that Dr. E. J. Doering, late of Chicago, has been promoted to the rank of Surgeon. His many friends in this city will receive the news with pleasure.

CALIFORNIA'S LAST, BEST GIFTS.—In the May number of this journal, under the above title, an article appeared which was calculated to do injustice to one of our manufacturing houses, largely interested in the introduction of new remedies.

The article from which our excerpts were made originally appeared in the *Pacific Medical and Surgical Journal* for October, 1878. A subsequent number of this journal (January, 1879,) stated editorially, that "the former article was not intended to deny medicinal value to the plants in question, but simply to expose the deception of introducing preparations of old remedies under new names;" that is, in offering old remedies under coined names. But the editor effectually disposes of this charge by admitting that *Cascara Sagrada* is the common Spanish name for the drug in question, although he had previously stated that it was unknown to any botanist on the Pacific Coast. In fact, the original charges have been so modified that no further reply to them than the above statement seems necessary; still, to show how generally Dr. Gibbons' article has been condemned by the medical press, we add excerpts from editorials of some of the most prominent journals.

Physicians desirous of thoroughly investigating these charges will do well to send to Messrs. Parke, Davis & Co., of Detroit, for their pamphlet, containing all that has been published in relation to the matter.

"It shows prejudice, hence it is not scientific. We are sorry it is so, for the journal being indigenous to the same State as the plant, we expected real information."—*Chicago Pharmacist.*

"A great deal more has been made of the matter than was any occasion for. Of one of the remedies which is attacked, the cascara, we may say that it has now an excellent reputation in this locality."—*Louisville Med. News.*

"We are surprised that any enlightened member of the profession should object to any remedial agent because of its introduction by an eclectic."—*N. Y. Hospital Gazette.*

"But logic is logic, and failing to find anything objectionable in the remedies themselves, Dr. Gibbons opens his batteries on Dr. Bundy, the introducer of them. He proclaims the fact that Dr. Bundy is not a 'regular.' We must confess that we fail to perceive what Dr. B.'s 'regularity' or his lack of it has to do with the therapeutic properties of the drugs."—*Michigan Med. News.*

"We knew this firm (P. D. & Co.) was composed of shrewd business men, having it for their object to make an honest reputation and to obtain a fair return on their investment of brains, labor and capital. Hence we were satisfied that the originators of the damaging statements were mistaken."—*Detroit Lancet.*

"Those journals which made such haste to quote the first article from the *Pacific Journal* can hardly do less, in decency, than quote the second, and thus, as far as may be, make amends." —*Ohio Medical Recorder.*

"We were much astonished when we read Dr. Gibbons' article in the October number of the *Pacific.* * * * * Our own experience has taught that Cascara Sagrada, Grindelia Squarrosa and Yerba Santa are valuable remedies."—*St. Louis M. & S. Journal.*

"Although we know nothing of the orthodoxy of the professional status of Dr. Bundy, yet we claim to belong to that 'school of medicine' that hesitates not at the use of any drug, preparation or instrument that will benefit an afflicted fellow-being, no matter from what source it may have been derived, nor by whom introduced."—*Southern Practitioner.*

"It will be seen that Dr. Henry Gibbons here acknowledges that several of the plants in question are really valuable. This is all that the profession cares to know."—*Physician and Surgeon.*

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, July 7 and 21.

West Chicago Medical Society—Mondays, July 14 and 28.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.

Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.

Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.

Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.

Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.

Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.

Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.

Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

CHICAGO MEDICAL

JOURNAL & EXAMINER.

VOL. XXXIX.—AUGUST, 1879.—NO. 2.

[In these pages dimension and weight are expressed in terms of the Metric System, and temperature in degrees of the Centigrade Scale.]

Original Communications.

ARTICLE I.

LACERATION OF THE CERVIX UTERI.

By A. REEVES JACKSON, A.M., M.D.. etc., formerly Surgeon-in-Chief of the Woman's Hospital of the State of Illinois; Fellow of the American Gynæcological Society, etc., etc. Read before the Chicago Medical Society, July 7, 1879.

If Dr. Thomas Addis Emmet had done nothing more for the medical profession than tell its members what he has told them in reference to the subject of laceration of the cervix uteri, he would be entitled to their warmest gratitude. Not that he was the first to recognize the lesion as a distinct factor in the causation of uterine disease, for this had already been done, as early as 1856, by Dr. A. K. Gardner,* who speaks of "laceration of the os and cervix," as causes of ulceration, enlargement of the cervix, sterility, etc.: but to Dr. Emmet is due the credit of effectively calling attention to the frequency and pathological importance of the injury, and, above all, of showing how to recognize and cure it. Indeed, he has written so much about it, and so identified himself with its history, that other observers have been able to do but little more than add to the number of his facts, corroborate his views and commend his methods.

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* The Causes and Curative Treatment of Sterility, etc., by A. K. Gardner, A.M., M.D., New York, 1856.

Though it is not to the lot of all to be discoverers of important truths, all may aid in their dissemination; and I hold it to be the duty of those who have found themselves benefited and their hands strengthened by the observations and experience of others, to assist, so far as it may be in their power, in extending these benefits to their fellows. Herein lies the reason why, although I have no new facts to offer, nothing, indeed, but the meagre results of my own experience, I yet feel warranted in asking your attention to this subject; one whose interest and import are not, I am sure, duly appreciated by the profession at large.

If it were in my power to do so, I would like to make every member of this society, and every member of the medical profession, understand and realize that injuries to the uterine cervix during the process of parturition are not of rare and occasional happening, but that they are, on the contrary, of extremely frequent occurrence; that these lesions are not trivial in their nature and consequences, but that they are often of great and enduring pathological moment; that they are frequently the undiscovered cause of many of the derangements of health in women which have been and still are habitually attributed to other sources and conditions; that the venerable myth "ulceration," and its Fidus Achates, enlargement of the cervix, are so rare (except when the seat of malignant disease) that we may reach a ripe old age without seeing either of them; and that these terms, in such common use, may and should be in almost every instance rendered "laceration of the cervix." When these truths—for such I hold them to be—are known and accepted, there will not, I trust, be so many nervous, weak-backed, tired-out women as now crowd our waiting-rooms; we shall hear less of the uselessness of pessaries for "falling" wombs, less of amputation for enlarged ones; know less of failures to cure "the whites;" see less of pallid patients who wander—hopelessly at last—from one doctor to another, only to have repeated, by each one in turn, the "burning off" of the ulcers! This was the ordeal through which all womb-ailing women formerly passed, and through which thousands are passing now.

Until within the past two or three years the literature of cervical laceration was very scanty. In the autumn of 1862, Emmet* accidentally discovered the existence and importance of the injury, and devised an operation for its cure. Seven years later he published a paper,† in which the details of the operation were fully described. In November, 1874, he published another paper,‡ giving prominence to the frequency of the lesion, and the relation it bore to the etiology of pelvic disease; and in December, 1876, he read still another paper before the New York County Medical Society, on "The Proper Treatment for Laceration of the Cervix," which was subsequently published.§ A few additional papers by Wing,‖ Baker,¶ Breisky,** Dudley†† (two), Goodell ‡‡ and Mundé, §§ constituted about allthe published writings upon the subject until the appearance of the recent work of Dr. Emmet (op. cit.), in which it is treated systematically and with great fullness.

Dr Emmet gives a graphic description of the manner in which he detected the presence of the laceration, and the first case upon which he operated. The patient had been an invalid for several years, and had been treated for menorrhagia and hypertrophy of the uterus with an extensive erosion. The latter had, with great care, been healed several times, but a relapse always occurred. Attributing his want of success to the condition of his patient's general health, which was very much impaired, he had almost despaired of affording her any permanent relief. He says:

> While making a digital examination one day, I was puzzled to account for the greater width of the cervix in comparison to that of the body

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* Principles and Practice of Gynæcology, p. 445.

† *Amer. Jour. Obstetrics*, Feb., 1869.

‡ *Amer. Jour. Obstetrics*, Nov., 1874.

§ *American Practitioner*, Indianapolis, Ind., Jan., 1877.

‖ *Bost. Med. and Surg. Jour.*, March, 1876.

¶ *Ibid*, Sept. 27, 1877.

** *Wiener Med. Wochenschrift*, 1876.

†† *New York Med. Jour.*, Jan., 1878. *Chicago Med. Jour. and Exam.*, Mar., 1878.

‡‡ "Laceration of the Cervix Uteri." The address in Obstetrics delivered before the Medical Society of the State of Pennsylvania, by Wm. Goodell, A.M., M.D., May, 1879.

§§ *Am. Jour. Obstetrics*, etc., Jan., 1879.

beyond, a condition I had for the first time appreciated. I placed her on the left side, and with Sim's speculum brought the cervix into view. I drew the posterior lip forward toward me with a tenaculum, but with no special purpose, when I was surprised to observe that it had decreased to nearly half its previous size. On lifting up the anterior lip with a tenaculum in the other hand, so as to bring the two portions in approximation, the outline of a cervix presented, of nearly a normal size. The difficulty was at once apparent, for the parts had rolled back within the uterine canal, and a deep lateral fissure became evident, which extended on each side entirely through the cervix and beyond the vaginal junction. On separating the flaps and forcing them back to their former position, I saw the tissues gradually roll out and the cervix again present its previous appearance. There could then be detected no appearance of laceration, and with the reduplication of the vaginal tissue over the sides of the uterus, as I have already described, the cervix presented a normal length above its apparent junction with the vagina. The remedy at once suggested itself; the operation was performed. * * * On completing the operation, the uterus was five inches in depth; it rapidly reduced in size, and in time all evidence of local disease subsided.

My own attention was called to this subject more than four years ago, in connection with a case which was almost the counterpart of the one just related.

Mrs M., thirty-two years of age, the mother of three children, the youngest of whom was five years old, had been under my care about two years, with occasional intermissions. She had become as tired of me as I was of her, when one day she asked me whether I thought she could be cured if she went to New York. I felt piqued by the question, which aroused in me a fresh interest in her condition. I had a short time before been reading Dr. Emmet's paper, already referred to, on the subject of laceration of the cervix, and it occurred to me to ascertain whether my patient might possibly be suffering from such an injury. Accordingly I placed her in the knee-chest position, and introduced a perineal elevator into the vagina. The latter became widely distended, and I was afforded a full view of its anterior and lateral walls, and the vaginal portion of the cervix. But the parts appeared so differently from what I had been accustomed to see, that I almost doubted their identity. Prior to this time I had always examined her in the dorsal position, the head and shoulders being raised. In that posture, and also when the patient was on her feet, the lower part of the uterus was found just within the vulva, and a finger could be passed into the vagina to the depth of two and a half inches before it reached the apparent utero-vaginal junction. Now, however, as the weight of the uterus carried it from the vulva and drew out the vaginal walls to their full length, I saw that the erosion, instead of appearing, as formerly, to involve a flattish surface nearly two inches in diameter at the end of an elongated cervix, was depressed in the middle, and reached not only to but beyond the vaginal junction; while the vaginal portion of the cervix was actually but little longer than it should be. Subsequently, aided by an assistant, I brought the anterior and posterior flaps together with tenacula, and the red eroded tissues were rolled in out of sight, and the mushroom shaped thickening of the cervix at once disappeared. In short, it was evident that I had before me a typical case of bilateral laceration of the cervix uteri, which I had been typically maltreating for something else. I had been trying, *secundum artem*, to cure this patient of a granular erosion of the os uteri, with enlargement and elongation of the cervix uteri, properly speaking, neither of these conditions were present, or at least, only as symptoms.

Although this was the first case in which I discovered the lesion, it was not the first in which I operated; for, before I could obtain the consent of Mrs. M.—or rather that of her friends—to have an operation performed, I had succesfully operated upon another lady in whom, guided by my experience in the former case, I diagnosticated a laceration at the first examination.

Down to the present time I have operated twenty-three times for this malady. In one case the operation was followed by a rather severe attack of pelvic cellulitis, from which, however, the patient recovered, and the operation succeeded. In another case, there was secondary hæmorrhage, requiring the vaginal tampon. In three cases the parts failed to unite—in two completely, in one partly, results due, I believe, to the lack of sufficient and proper preparatory treatment. In two of these, a second operation was successful; the third declined further treatment.

Frequency.—The experience of Dr. Emmet, based upon 500 cases, observed in private practice leads him to affirm that 32.80 per cent., that is, nearly one-third, of "all women who had been impregnated, and had suffered from some form of uterine disease, were found to have laceration of the cervix;" and he concludes his consideration of the subject by stating that "at least one-half of the ailments among those who have borne children are to be attributed to laceration of the cervix."*

While I believe that there are few who would go so far as to endorse this statement unconditionally, I am of the opinion that, if all cases of laceration, slight and severe, be included, he is not wide of the mark; certainly, he is more nearly correct than are those who regard the injury as of rare occurrence. The conclusions of other observers whose attention has been directed to this point, do not greatly differ from those of Emmet. Thus, Dr. P. F. Mundé* found 119 lacerations in 700 women examined; and Dr. Goodell † says, "My own experience at the Dispensary for Diseases of Women at the University of Pennsylvania, would lead me to infer that about one out of every six women suffering from uterine trouble has an ununited laceration of the cervix."

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* Loc. Cit., p. 480.

I am aware that this great frequency of the lesion has been denied, but it is evident from what has already been advanced, that any one who has not given special attention to it—who has not looked for it—and who, above all, has not adopted the proper means for detecting it, can hardly be in a position to form a just opinion upon the question.

Causes.—Previous organic disease of the cervical uterine tissues doubtless predisposes to the accident. Cervical metritis, for example, whether in its soft or indurated stage would interfere during parturition more or less efficiently with the gradual and uniform dilatation of the parts upon which the integrity of these latter depend. So, likewise, would the rigid cicatricial condition of the os and cervix, which is so frequently found as the result of the long continued application of nitrate of silver, caustics, etc., for real or fancied disease.

Among the exciting causes may be ranked obstetric operations, as turning, the use of forceps, etc., not necessarily from carelessness or lack of skill on the part of the obstetrician, but because these manœuvres require a certain amount of manual force, and also because of the state of the parts which frequently makes their employment necessary. Of course, such an untoward result is more likely to follow these procedures if they be attempted before the os uteri is in a suitable condition of dilatation or dilatability. A laceration may likewise occur in consequence of an undue violence in delivering the placenta. Other causes of this character are, the administration of ergot in unsuitable cases, especially before dilatation has been accomplished; the premature rupture of the fœtal membranes, whereby their soft and insinuating pressure is replaced by the more unyielding head.

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* Loc. Cit.

† Loc. Cit.

I have had the impression that rapid labors, by not affording sufficient time for normal dilatation, would be found to be a cause of laceration, but an examination of the tables furnished by Dr. Emmet, seems to show that such is not the case. In 164 cases in which the character of the labor was ascertained, it was rapid in 30, tedious in 50 and natural in 21.

Varieties.—The injury varies both in direction and extent. It may involve only the anterior or posterior lip or both; it may be transverse or oblique. The rent is not always in a straight line, but is sometimes curvilinear, or at least it assumes this direction during the healing process.

In extent, too, it varies greatly; in some cases involving only the edge of the os uteri to the depth of a quarter or third of an inch, but in others passing quite across the crown of the cervix, and in still others extending to and beyond the vaginal junction. Dr. Emmet * mentions several instances in which the rent, passing the cervical limits invaded the bladder and posterior cul-de-sac respectively, leaving as a consequence, in the former case, either an extensive fistula involving all the injured parts, or, where partial spontaneous union subsequently occurred, either a small vesico-vaginal fistula just in front of the cervix, or a vesico-utero fistula, through which urine might escape from the bladder into the uterine canal at a point as high as the internal os uteri or even above.

Lacerations which do not extend to the vaginal junction are called incomplete, while those which reach to or above that point are said to be complete.

There is another variety of the injury besides those mentioned which may also be termed incomplete. It is that in which the rent does not involve the entire thickness of the cervical wall. Emmet describes these cases as follows: "It would seem as if partial laceration took place from the internal os downward on different sides through the mucous membrane and deeper tissues, without extending to the vaginal surface of the cervix, making folds not unlike those between the ribs of a partially opened umbrella, which disappear when it is fully opened out. Through the patulous os and canal the mucous membrane is seen prolapsed, and its appearance is like that presented after dilating with a sponge tent a partial contraction of the canal which had taken place above, but had not yet extended to the external os. The cervix is frequently but little enlarged in diameter, but its walls are seen to be thinner than natural."

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* Vesico-Vaginal Fistula, etc. By Thos. Addis Emmet, M.D. Wm. Wood & Co., New York.

Yet other varieties than those enumerated result from the number of fissures. If there be but one, to the right or left, it is said to be unilateral; while, if there be one on each side it is bilateral; should there be still more, trilateral, stellate, etc.

Of all the varieties of laceration, Dr. Emmet believes that those in the antero-posterior direction are the most frequent, but that, owing to the fact that the patient is enforced to maintain the recumbent position for some time after labor, the pressure of the lateral walls of the vagina maintains the torn edges in contact until union occurs, leaving only a cicatricial line to mark the site of the injury. My own experience, much more limited, certainly, does not, however, coincide with that opinion. Although since my attention was first called to this subject, I have carefully looked for the evidences of previous laceration, I have not found them nearly so often in the anterior and posterior lips as in a transverse direction; and I think we might in advance suppose that this should be the case from the fact that the cervical walls are thinner in this direction than in the other. However this may be, it is quite certain that lacerations through the anterior or posterior lip are much more apt to heal spontaneously than are those in other directions, because of the lateral pressure of the vaginal walls; and, also, that even where spontaneous union does not take place, the same force tends to present the serious consequences which result from the eversion of the cervical lining which so much more commonly occurs in the other varieties of cervical laceration, especially the bilateral, provided they be of sufficient extent.

Progress, Symptoms, etc.—Lacerations which involve only the edges of the os uteri frequently, perhaps generally, heal spontaneously before the woman leaves her bed.

Those which occur in a forward or backward direction, even when complete, may likewise unite and leave little or no trace, the raw surfaces being kept in contact in the manner already indicated.

Most of the cases met with in practice are those in which the laceration is in a transverse direction, and in which it has passed beyond the crown of the cervix. In nearly all of these, especially where the rent has extended to or beyond the vaginal juncture — the intra-cervical membrane becomes everted. Its delicate covering accustomed to contact with only its own alkaline secretion is now constantly bathed with the acid secretion of the vagina, which acting as an irritant, soon causes removal of the epithelium. This abnormal state of the parts prevents or retards the proper involution of the uterus, which, consequently, remains enlarged and soft. All these unfavorable conditions are increased so soon as the woman quits the bed and gets upon her feet. Then the heavy uterus, inadequately sustained by its supports, presses upon the floor of the pelvis. The intra-cervical surface of the posterior flap of the laceration impinges upon the corresponding vaginal wall, while the anterior flap is pushed toward the vulva. The everted and eroded surface now suffers additional irritation from the pressure and chafing to which it is subjected. Under these circumstances the flaps are forced farther and farther apart; the extruded lining membrane, by reason of its interrupted circulation, becomes thickened and congested, and thus assists in its own out-rolling. The uterus being in a state of fatty degeneration (the first stage of involution only having been accomplished), the flaps are soft and yielding. Their inner surfaces are hence readily flattened out against the vaginal walls. and the entire cervix finally is everted, the internal os uteri becoming the lowest portion of the organ, and appearing at what seems, owing to the reflection of the vaginal tissue, a very long and very broad crevix.

The nabothian glands, thus exposed, are at first stimulated to undue activity, as evinced by the greatly increased quantity of secretion poured out by them, and which constitutes the glairy, tenacious discharge, which is so characteristic of endo-cervical inflammation. By and by, they become diseased. Their excretory ducts close, and their contents being thus retained, they enlarge and form protruding roundish masses, varying in size from that of a millet-seed to that of a grain of barley. Some of these rupture, and their inclosed mouths present an appearance of increased roughness and rawness to the already eroded surface. Before bursting they may frequently be felt as small shot-like bodies in the tissues.

When the injury is confined to one side, the eversion of the cervical lining is not so marked, and occasionally does not occur at all, even when the rent has extended to the vaginal junction. In these cases there has usually taken place some degree of union at the bottom of the fissure, and the cicatrix thus formed restrains, partially or wholly, the tendency to protrusion.

Symptoms.—The symptoms produced by laceration of the cervix consist of various pains in the back, hips and thighs; a sense of weight and "dragging" in the pelvis increased in severity when the patient is in the standing posture, or has undergone any unusual amount of fatigue. Leucorrhœa is nearly always present, and the discharge is sometimes tinged with blood. Menstruation is frequently though not always disturbed. Usually the flow is increased in quantity, and appears after shortened intervals; metrorrhagia is also not infrequent. On the contrary, in a smaller number of cases the menstrual discharge is diminished in quantity. Sexual appetite is frequently impaired, and sometimes abolished entirely. Neuralgic pains referred to the region of the cervix, sometimes of great intensity, are present in some instances.

In the worst class of cases no long time elapses before the lack of exercise and the persistence of pain and exhausting discharges, produce their legitimate results upon the general health. Digestion is impaired, the appetite fails, the bowels become constipated, assimilation is interfered with. A lessened supply of impoverished blood produces pallor and sallowness of complexion, debility, disturbed and insufficient sleep. The stomach, liver, bowels, kidneys and especially the bladder and rectum all contribute their quota of sympathetic manifestions and combine to render the woman's life utterly wretched.

One of the notable effects of the injury as pointed out by Dr.

Goodell * is that of sterility. He says, "This lesion is so common a cause of sterility that I always suspect its existence whenever a guileless woman stops bearing after her first labor."

As a rule, the severity of the symptoms, local and general, resulting from laceration of the cervix, are in direct proportion to the extent of the injury, and especially to the amount of ectropium present. But this is by no means always the case. I have known some instances in which the laceration was of very moderate extent, and in which only a small portion of the cervical lining membrane was extruded, and yet the patients were obliged to be in bed the greater part of the time on account of uterine and ovarian neuralgia, dysmenorrhœa, pains in the back and pelvis, general anæmia, etc.; while, on the other hand, I have in mind one case in which, with a transverse laceration extending on both sides from the os uteri quite to the vaginal junction, with accompanying extensive eversion, the woman was able to perform her usual household duties. These anomalies of the relation between cause and effect are not, however, as is well known, confined to the injury under consideration. The history of disease —of pelvic disease, particularly—is full of them. The extent to which women suffer from a given amount of disease or injury of the reproductive organs is greatly influenced by the social condition and surroundings of the patient. Those in the higher ranks of life, who live luxuriously, whose nervous systems have been unduly and unsystematically developed at the expense of the osseous and muscular, suffer most, for in them is engendered an unnatural tendency to irritability and emotional and sensational disorders.

Diagnosis.—It would seem that, from the accessibility of the parts both to touch and sight, nothing could be easier than the recognition of a laceration of the cervix uteri; but the fact that it eluded discovery by so many expert and earnest workers for so many years, shows that what appears to be so simple a matter is really not so. And, if any one should still entertain a doubt upon this point, Dr. Emmet's testimony is surely sufficient to remove it. He says,† "It was fully six years after my first operation before I had gained experience enough to detect this lesion under its varied forms."

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* Loc. Cit.

† Principles and Practice of Gynæcology, p. 447.

No doubt the tardy recognition of the injury, and the difficulties attending its diagnosis may be explained by the fact that ocular examination of the parts is usually made with tubular or valvular specula; and these instruments, especially the former, by their peculiar action prevent rather than facilitate the revelation of the condition. Another circumstance which leads to error is that women are commonly examined while lying on the back, with the head and shoulders elevated. In this position the heavy uterus is found low down in the pelvis, and, carrying with it a reflection of the vagina, the vaginal portion of the cervix acquires a fictitious elongation, to the extent, sometimes, of more that two inches. At the same time the forces which separate the flaps of the laceration also cause these latter to present a flattened surface of eroded tissue from one to two inches across, with the apparent os uteri externum in the center. Looked at in this state, all appearance of laceration is lost.

The conditions with which laceration is liable to be confounded are, simple granular erosion, thickening and elongation of the cervix, ulceration and epitheloma.

Erosion of the os and cervix uncomplicated with laceration, is usually caused by the irritating contact of uterine catarrhal discharges; and to show how comparatively rare this condition is, I may mention that, among the 700 women examined by Mundé, and who furnished 119 cases of erosion *with* laceration, there were but (11) eleven cases *without* that complication.

Where there is actual enlargement of the cervix, the part is gradually increased in diameter from below upwards towards the body of the organ; whereas, when a laceration with eversion is present the lowest portion is the largest; and between it and the part above there is formed a more or less distinct neck or narrowed portion, so that its shape has been compared to that of an inverted mushroom. Hence, when by the touch this constricted portion can be felt, a laceration may be suspected.

I do not wish to be understood as implying that there may not be actual enlargement of the cervix when the latter has been lacerated. In point of fact, the irritation to which, in cases of marked eversion, the cervical lining is subjected, the cystic degeneration of its glands, and the continually increasing obstruction to its circulation combine to produce what Klob denominates a "formative irritation," which results in increased growth.

But the touch is not sufficient to enable us to distinguish a laceration from true elongation of the cervix, a condition, by the way, which Emmet affirms has no existence. Whether in this he be correct or not, the *apparent* elongation of the cervix which is present in some cases of laceration may always be made to disappear by placing the patient in the knee-chest position. The superincumbent pressure of the intestines being thus removed, and the uterus permitted to fall *away* from the pelvic floor rather than *toward* it, the vagina is pulled out to its full length, including the reflected portion which has been carried down by the cervix, and the true cervico-vaginal junction is at once seen.

Any one who has observed the appearance presented by the red, roughened, eroded cervical lining in a case of laceration of the cervix, need not be told how easy it is to mistake it for a true ulceration of the part. But, if by the term ulceration of the cervix we mean to imply a loss of substance other than epithelial, it is a comparatively rare condition. The only true ulcers of this part are those produced by friction when the uterus is procident, or which are the result of chancroid or carcino-matous disease.

The extruded lining membrane studded with enlarged follicles, elevated and swollen, bleeding readily, and bathed with muco-purulent secretion has not infrequently been mistaken for malignant disease, and, it is reasonable to suppose, that some of the cases of reported permanent cure by amputation, cautery, etc., of supposed carcinomatous enlargement of the cervix, have really been cases of laceration with extensive eversions.

Now, from all other conditions presenting a red, eroded or ulcerated surface, and from all those which are accompanied by enlargement, laceration may be distinguished with the utmost certainty and precision. It is done as follows: Place the patient in the semi-prone position, or, still better, the knee-chest position. Introduce Sim's duck-bill speculum or other form of perineal retractor, and when the vagina is sufficiently distended insert small tenacula into the sound mucous membrane in front and behind, just beyond the edge of the eroded surface. If now, by approximating the points of the tenacula the erosion can be rolled into the cervical canal, and the vaginal portion be made at the same time to present a comparatively normal shape and size, it is a laceration. With no other condition can this manœuvre be made with these results.

If the laceration has healed without union, and there be left a fissure to mark its site, there can be no difficulty in recognizing it. But this result does not commonly occur unless the laceration has been unilateral; and these cases, so easily detected, are not of great pathological importance, for they are not attended by the out-rolling of the cervical lining which is generally the essential cause of the symptoms resulting from the injury. In by far the greater number of bad cases no cleft or fissure whatever is apparent either to sight or touch.

Treatment.—Many of the distressing symptoms, backache, pelvic pains, leucorrhœa, may be greatly benefited by rest in the recumbent position, vaginal injections of hot water, glycerine tampons, astringent and caustic applications, etc. By persistence in the use of these means in conjunction with the internal administration of ergot, strychnia, iron, etc., and such other constitutional remedies as may be indicated, patients afflicted with laceration, even in some of its severer forms, may be kept in a fairly comfortable condition; and where the injury is slight and unaccompanied with marked eversion, a permanent cure may sometimes be effected. Usually, however, soon after their use is discontinued, and the patient resumes her ordinary duties, the former symptoms manifest themselves anew, and she becomes as miserable as before. This result is quite certain to occur if the injury has been so extensive as to permit much eversion.

When, in consequence of its increased size and weight the uterus has become retroverted and prolapsed, much relief may sometimes be obtained by raising the organ to its proper position and supporting it with a suitable pessary. This not only serves to lessen the uterine congestion by promoting the emptying of the uterine veins and sinuses, but it also prevents the extruded and eroded mucous membrane from pressing and rubbing against the vaginal walls. However, the use of pessaries is not always feasible. In some cases there is present so great a degree of tenderness in and about the uterus as to preclude the slightest pressure from an instrument, while in others the cul-de-sac is so effaced by the contraction of cicatricial bands and post-uterine inflammatory deposits as to leave no resting place for the upper end of the pessary, which, consequently, has a constant tendency to slip forward over the cervix and take a position between it and the bladder. In this position it not only ceases to be of benefit but is positively hurtful.

I may say, in passing, that I regard those cases of retroflexion and retroversion of the womb as practically incurable in which the body or fundus is bound down by adhesions, or where, without adhesions, the displacement is accompanied either by a very shallow cul-de-sac or a very short vaginal portion.

When the use of a pessary is indicated I prefer a Hodge closed lever, or some one of its modifications, especially that of Dr. Albert Smith.

For the relief of the tender and painful condition of the parts just referred to, I have found the following plan satisfactory: Once a week I abstract from the cervix a half ounce to two ounces of blood, by numerous punctures with Buttle's lance. The punctures are made directly into the eroded mucous tissue and into any cystic glands that may be apparent. When these latter are small and very abundant short incisions are preferable to punctures, as they are less likely to close subsequently. The operation is followed by the application to the cervix of a glycerine tampon on which has been sprinkled two or three grains of iodoform. When the odor of this agent is objected to I replace it with one grain of sulphate of morphine. In addition, I direct a hot water vaginal injection to be used every night at bedtime—except on the day of scarification—and a glycerine tampon unmedicated, to be placed every morning. All this local treatment is suspended during the menstrual period. I need hardly say that the blood-letting, even to the slight extent advised, is contraindicated in the case of patients who are anæmic and in whom the blood-making power is impaired.

By the judicious use of these means for a few weeks we may frequently be enabled to use a small pessary (the instrument should never be large) where at first it would have been impossible to do so.

But, as already intimated, all the foregoing means are at best uncertain, always tedious, and generally ineffectual. It is fortunate, therefore, that we have a remedy which is both safe and certain; one which not only removes the symptoms of the disorder but which restores the parts to their normal condition.

I refer to the plastic operation devised by Emmet, and to which my friend Dr. E. C. Dudley has given the distinctive name *trachelorrhaphy.*

This operation is one of the most successful with which I am acquainted, and when its simplicity and freedom from danger are considered in relation to the amount of benefit which it is capable of conferring, one of the most useful in uterine surgery.

Treatment preparatory to the Operation.—In most cases where the operation is decided upon, some amount of preparatory treatment is beneficial and in some it is absolutely necessary.

It should be an inflexible rule in plastic surgery to have the parts in a healthy condition, if possible, before any operation be attempted, otherwise full success cannot reasonably be expected. To lack of attention to this rule I think may be fairly attributed many of the failures of operations undertaken for the cure of vesico-vaginal fistula, ruptured perineum, vesicocele, etc. In lacerations of the cervix it is not always possible to bring the parts into this desirable state of local health, because their displacement is incompatible with it; still it may always be approximated.

The proper preparatory measures should be such as tend to remove or lessen uterine congestion; as the daily hot vaginal douche, the evacuation of the cervical cysts, the local obstraction of blood, the glycerine tampon, etc.; in short, just such means as have been detailed under the head of palliative treatment. No attempt should be made to glaze over the eroded surface with the solid nitrate of silver, formerly, and, I fear still, the common practice. The improvement produced in the appearance of the part by this measure is fallacious. The dense cicatrical tissue thus formed, by enclosing and compressing the peripheral nerve filaments almost invariably causes uterine and ovarian neuralgias, diminishes or destroys sexual appetite, and leads to various other nervous and psychological disturbances.—(Goodell).

The existence of marked tenderness as a result of inflammation in the neighborhood of the uterus or broad ligaments, is a contra-indication to an operation ; but the presence of old inflammatory exudations which are not the seat of tenderness or pain, I do not consider so, provided there be no present uterine congestion. For the operation, if carefully performed, without dragging the uterus from its position, is less likely to re-establish fresh inflammation than is the continuance of the laceration. I have operated two or three times under these circumstances without any untoward result.

The best time for the operation is between the third and seventh day after a menstrual period; as the pelvic organs are then physiologically more quiescent than at any other time, and besides, sufficient time is afforded them to recover entirely before the onset of the next period.

The patient should take a laxative dose of medicine in the afternoon of the day preceding that of the operation ; and I find it well also to have an enema of warm water given on the following morning — say an hour before the operation.

Operation. — All being in readiness, the operation may be performed as follows : The patient, being etherized, is placed on her back on a firm table, which need not be more than four feet long. She is drawn forward so that the hips project three or four inches beyond the edge, and each lower limb is given in charge of an assistant, by whom the thighs are flexed upon the abdomen. The operator then passes one or two fingers of the left hand into the vagina, and with the right introduces the blade of a perineal retractor. (I prefer one of this sort for the purpose : it is a modification of that of Simon, and has a much shorter and much flatter blade than Sim's duck-bill.) This is guided to its position in the posterior cul-de-sac by the fingers in the vagina, and the perineum being pressed downwards while the vaginal walls are separated by the fingers, the cervix is readily brought into view.

One of the assistants now takes charge of the retractor with his disengaged hand. The anterior flap of the laceration is seized with a small double-hooked vulsellum, and, aided if necessary by supra-pubic pressure, the lower portion of the uterus is brought quite to the vulva. Both flaps are now approximated, with the view of determining accurately the proper position of the external os uteri, the extent of the laceration, the quantity of tissue to be removed, the number of stitches requisite, etc. These points having been settled, a curved or rectangular needle, fixed in a handle, and having its eye near the point, is passed through the posterior flap at a point which is to mark the middle of the os uteri; it carries a strong silk suture, the loop of which is seized when it appears, and the suture is left in the flap on the withdrawal of the needle. The same process is repeated with the anterior flap. By means of these sutures, complete control of the cervix is had throughout all the subsequent steps of the operation. They should be sufficiently long to enable the assistant who has them in charge to draw them in any needed direction, without at all incommoding the operator.* I formerly used a single thread, which passed through both lips, but this prevented the separation of the latter when they were drawn upon, and I find it much more convenient to transfix each separately, so that either lip can be acted upon independently of the other.

The surfaces of the parts to be joined together are next made raw. I prefer doing this with scissors, as being a more expeditious and less bloody mode than that by the knife. The thickness of tissue to be removed depends somewhat upon the shape of the flaps. If their inner surface be full and rounded, the convexity should be wholly ablated. A safe rule is to remove enough to permit the opposing sides to be brought *easily* into contact, so that there may be no undue strain upon the stitches. Emmet lays much stress upon the necessity of removing all cicatricial tissue, regarding its presence as a frequent cause of neuralgia. Care should be taken to not freshen the surfaces too near the central portion of the flaps, lest their subsequent adhesion should result in obliteration or narrowing of the external os. A space at least one-half inch long should be left for this opening; for the subsequent shrinking of the part will reduce this to about the proper size. Indeed, a still more liberal provision for the outlet ought to be made, if there be present very great hypertrophy of the uterus.

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* I find that Dr. Goodell makes use of a similar device. He "passes on each side of it" (the os externum), "through both lips of the cervix, a long iron-wire suture."

The opposing denuded surfaces should be equal in length and width, so that when brought together coaptation may be accurately made.

Usually but little hæmorrhage attends the freshening of the tissues, although in some cases it is sufficiently profuse to delay the operation somewhat. The only artery likely to be injured is the circular, which passes near the vaginal junction, sometimes just within the outer angle of the fissure, and great care should therefore be taken to not cut deeply when paring the edges at this point. The capillary bleeding commonly ceases directly the sutures are tightened.

The passing of the sutures is sometimes very difficult, owing to the thickness and density of the tissues. It is necessary to have a strong needle holder, one which permits the needle to be placed at any angle. The needles should have a cutting edge near the point, and should vary in length from three-fourths of an inch to an inch and a quarter; they should be thick enough to allow of a large eye through which the loop of a doubled silk thread may pass. The eyes of most needles are too small.

The first suture is passed at or near the inner angle of the fissure. The part being steadied by means of a firm tissue-holder, the needle is entered about a quarter of an inch from the edge of the freshened surface, and made to emerge just at the edge of the undenuded strip which has been left to form the continuation of the uterine canal; it is then re-entered at the corresponding point opposite, and, passing through the other flap, finally issues at a point which corresponds with that of its first entrance. A silver wire of suitable length is then connected with the loop, and is left in place on withdrawal of the needle, in the usual manner. It is immaterial through which flap the needle is passed first. The number of sutures required will vary according to the length of the fissure. Usually, from two to four are needed on each side. They should be placed about one-third of an inch apart.

In my more recent operations I have adopted a different plan from that just described, for passing the sutures, in all cases in which the cervix could be brought sufficiently within reach ; that is, I have used a small perineal needle in a fixed handle, with the eye near the point. With this I transfix both flaps, and when the eye of the needle emerges from the second one, it is directly threaded with the silver suture. The needle is then withdrawn, leaving the wire in place. In this way the sutures are inserted with great accuracy and rapidity.

Either silk or silver wire may be used for the sutures. I prefer the wire, because, perhaps, I am accustomed to it, and know it to be reliable. Dr. A. J. Skene,* of Brooklyn, reports that he successfully uses silk, in every case obtaining a satisfactory result. If, upon further trial, silk be found equally trustworthy with the wire, the operation can be more quickly and easily done.

The sutures having all been inserted, the patient should be placed in bed, where, ordinarily, she ought to remain until the stitches are removed. This may be done as early as the eighth day, but I prefer, unless the prolonged confinement be especially irksome, or contra-indicated, to allow them to remain until the ninth or tenth. In one case, in which they were removed on the eighth day, the adhesion of the flaps was so feeble that they subsequently separated, and a repetition of the operation became necessary.

The operation is not a very painful one, and an anæsthetic, although desirable, is not always necessary. I operated on one patient without using any, and she subsequently stated that she suffered less from the pain of the procedures than she had on a former occasion from the nausea and vomiting following the inhalation of chloroform for the extraction of a tooth. And, in another case, in which Dr. Dudley kindly operated at my request, to exemplify the manner of Emmet, no anæsthetic was given, and although the operation lasted a full hour, the patient only complained of the constrained position and the action of the Sim speculum.

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* Proceedings of the Medical Society of the County of Kings, June, 1878.

Neither is there much pain or discomfort felt after the operation. Indeed, patients usually suffer so little from it that it is difficult to make them appreciate the necessity for lying in bed afterwards. And it is possible that this necessity has been overrated. Several times patients have, contrary to my directions, resumed many of their ordinary duties after the third day; in one case, on the second morning after the operation, I found the patient dressed and sitting up, and she informed me that she felt less discomfort in the parts than she habitually did before the operation. In none of these cases did the seeming imprudence produce any bad result or prevent a successful issue. Dr. Skene states that he has operated eight times at his office and sent the patients home in the street cars.

After Treatment.—At the close of the operation I am in the habit of placing in the vagina the ordinary cotton tampon saturated with glycerine, with a string attached to facilitate removal; and in the rectum a suppository of cocoa-butter, containing two grains of opium and one-sixth of a grain of extract belladonna. The tampon should be removed on the day following the operation, and the vagina should be carefully washed once or twice daily with warm water slightly carbolized. It is not necessary to prohibit the patient from leaving the bed to urinate, or for other necessary purpose. Rarely I have had to use the catheter once or twice. The bowels, if not open spontaneously, may be acted upon by a mild laxative, followed by an enema on the fourth or fifth day.

Among those who have investigated this subject and who have learned to recognize and treat the lesion—with few exceptions—there is no longer any doubt as to the safety, the efficiency, and in cases of *complete* laceration, of the necessity of hystero-trachelorraphy, as a means of cure. But there are a vast number of cases in which the laceration has been slight, in which the rent has not extended beyond the vaginal junction, perhaps only involving the crown of the cervix. In many of these cases the mucosa is only slightly everted, and there is no such apparent elongation or enlargement of the cervix as is seen in the more typical cases. But the patient suffers from leucorrhœa, backache, possibly menorrhagia, and may present marked nervous disturbance. What should be done for these cases? These are the milder forms of "ulceration," and it is the experience of all gynæcologists that they may be cured by topical applications of an astringent and caustic nature. But the treatment by these means is tedious, usually covering several months and sometimes is not successful. Iodine, carbolic acid, nitrate of silver, iron and similar applications fail very often to do anything more than temporarily ameliorate the patient's condition. After each menstrual period she is usually found to have relapsed more or less, and after exhausting her patience—perhaps her purse, also—and the ingenuity of one doctor after another, she finally ceases her efforts and accepts a life of invalidism as best she may. Even in the most successful of these cases, several weeks of uninterrupted treatment are necessary to the cure. Cannot and should not these cases, like the more severe forms of laceration, be treated by the operation?

Dr. P .F. Mundé, in an admirable paper, already alluded to [*] advocates the practice on the ground that by means of the operation such cases can be more quickly and more certainly cured than by the methods in common use, and he adds by way of final argument: "Another reason why trifling ectropia should not be allowed to go on for years unheeded and untreated, was recently advanced by Prof. Breisky,[†] of Prague, who has observed and operated upon four cases of laceration, in which one of the everted lips had become carcinomatous in consequence of the irritation to which the exposed cervical mucosa was subjected." These observations are confirmed by Veit,[‡] who, out of nine cases of carcinomatous cervices found three in which the disease originated in the enlarged glandular elements.

At a meeting of the German Gynæcological Society, held at Cassel, Sep. 12th and 13th, 1878, [§] Kugelman, of Hanover, expressed his disapproval of operative measures for the cure of such uterine ailments as were amenable to other less severe means of treatment, although the latter might require "much time and patience." In reply to this, Prof. Schröder said that "the patient, as well as the physician, needed time and patience," and that it was surely better for her to be freed from the trouble in a fortnight, by a safe and certain method, than to pass through months of treatment for an uncertain result.

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[*] Indications for Hystero-Trachelorrhaphy. Amer. Jour. Obs., June, 1879.

[†] Wiener Med-Chirurg. Rundschau, Aug. 1877.

[‡] Gyn. Sec. German Congress of Phys., 1877.

[§] See Amer. Jour. Obs., Jan., 1879.

ARTICLE II.

PRACTICAL HYGIENE, AS IT RELATES TO A PROPER WATER SUPPLY—THE DEFECTIVE SEWERAGE OF CITIES AND TOWNS, HOSPITALS AND ASYLUMS.* By J. N. DeHart, m.d.

The importance of the observance of the laws of hygiene, as they relate to a proper supply of pure water, and the imperfect sewerage of our large cities and towns, hospitals and asylums, is only receiving, at the present day, but a small share of the public attention which they so urgently demand.

This paper will allude to some of the impurities that are found in water, as revealed by the microscope, and the diseases produced by them, together with the bad effects resulting from defective sewerage.

The want of a good supply of pure water for domestic purposes leads to many bad results, not only in a private residence, where the wants of a family are not very great, but also in large communities where many persons reside, and in hospitals and asylums where many hundred patients are collected together for the treatment of diseases. It not only gives rise to impurities of all kinds, but the person and clothing are not properly cleansed, or are washed repeatedly in the same water; water for cooking purposes is used scantily; houses are not cleansed, streets become dirty, and sewers are clogged; and in these various ways a lack of a proper supply of pure water gives rise to impurities in the air itself. As a result of the facts just stated, we have an impairment of the health of the population. The deficiency of water in the cleansing of sewers causes the development of typhoid fever and choleraic diarrhœa, and our records show that epidemics of the latter have been checked by a heavy rainfall. The supply of water is a matter of the most urgent necessity, where persons are undergoing great muscular efforts, and it is very important and proper that it should be furnished in small quantities and quite frequently given.

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*This paper was read before the Wisconsin State Medical Society, at the annual meeting in Milwaukee, June 5, 1879.

It may be true that water containing a small quantity of organic matter may be used for a short time with but slight ill effects, but its continued use has caused the development and spread of diseases in many communities.

In some of these cases, very little attention has been paid, or inquiry made into the state of health of those using the water, and that most fallacious of all evidence, *a general impression*, without a careful collection of facts, has often been the only ground on which the opinion has been based.

This much is certain, that as correct investigations are carried on, and careful microscopic examinations are made, a continually increasing class of cases is found to be connected with the use of impure water, and it seems only reasonable to infer that a more rigid inquiry will further prove the frequency and importance of this mode of origin of some diseases; animal organic matter, especially when of fæcal origan, vegetable organic matter, when derived from marshes, and some salts are the principal noxious ingredients of the dangerous substances; the suspended animal matter and especially fæcal matters, are probably the worst.

This is shown in outbreaks of diarrhœa and typhoid fever. This fact makes the chemical examination of the color and turbidity so important. The thoroughly dissolved organic matter appears less hurtful.

Probably, also, the more recent the fæcal contaminations, the more injurious, since it has been observed, that the most poisonous attacks occur near wells into which, after slow percolation for some time, a sudden gush of sewage has taken place.

Animal matters forming fatty acids produce salts which though not oxidizing into nitrous and nitric acid, are as hurtful as the more oxidizable substances.

There have been a variety of opinions expressed in regard to the action of minerals in water, which is used for drinking and domestic purposes. While there are some mineral substances, such as sodium chloride or carbonate, or calcium carbonate, which within certain limits appear to do no harm, yet there are other mineral substances, such as calcium, and magnesian sulphates and chlorides, and calcium nitrate, which are undoubtedly injurious to many persons; a combination of impurities, and especially the co-existence of organic matter and calcium sulphate is hurtful; this has been proven by the analysis of water which contains them and which has produced disease. As far as at present known, the existence of infusoria of various kinds is not injurious, though their presence may indicate the existence of an abundance of organic impurities.

That impurities of water do cause diseases by their action upon the membranes, with which they come in contact, may be proven by an enumeration of some affections of the alimentary mucous membranes, viz.: dyspepsia, diarrhœa, dysentery, etc.

In the first mentioned disease, the use of large and frequent doses of magnesian salts, calcium sulphate and chloride in water may produce it.

The latter diseases may be caused by suspended mineral substances of clay, mud, etc., as the waters of the Mississippi and Missouri rivers,* also the waters of the Ganges and other rivers, at certain periods of the year, especially to persons unaccustomed to their use. The scales of mica are said to have caused diarrhœa among the inhabitants of Dhumsala, India; also suspended animal and fæcal matters and vegetable substances have been the cause of sudden attacks of diarrhœa.

The former and latter when washed off the ground by heavy rains into streams and rivers which supply cities and towns, have caused an epidemic of catarrh of the alimentary canal, as is frequently observed in this country.

In the summer of 1876, owing to the very slight rain fall, the Croton river which supplies the city of New York with water, became so nearly dry that there was great fear that the city would lack a sufficient supply of water for ordinary use. During the following September there was a very heavy rain fall, and the vast water sheds which supply this river, were completely drenched ; the decaying animal and vegetable matters which had been exposed to a long drought were carried down to the receiving reservoirs, and immediately following this heavy rain-fall, there was an outbreak of typhoid and malarial fevers within the hospitals of the city, as well as an endemic of diarrhœa and dysentery.

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* Hammond's Hygiene.

It is a well established fact that dissolved and putrescent animal organic matter, to the amount of 30 to 50 Ctm. per liter, may produce diarrhœa. Fæcal gases will cause catarrh of the alimentary canal, especially if organic matter be also present.

This was observed during the invasion of Mexico by the French, in 1861 and '62. This army suffered from a peculiar dyspepsia and diarrhœa at Orijaba, which was attended with the disengagement of gas and eructation of food, after meals. This gas was sulphureted hydrogen, and was traced to the use of water from sulphurous and alkaline springs. The symptoms of poisoning by water contaminated by sewage, are frequently similar to those already mentioned, viz., diarrhœa and dysentery, and sometimes irritations of the kidneys, liver, spleen and lungs. Pinel observed this fact 20 years since in the wards of Salpétrière, and Duchaulet noticed that the water furnished the patients at St. Lazare contained a large proportion of sulphate of lime, and other purgatives, which caused frequent attacks of diarrhœa. Nitrate of lime has a similar effect. Brackish water will also affect the mucous membrane lining the alimentary tract.

Occasionally animal organic matter acts in an indirect way by producing nitrates which act on metals. In illustration of this fact, a German physician, who was called to see persons who were supposed to have been drinking impure water, and became sick, found on examining the water, that it contained a considerable amount of copper. The cylinder of the pump was made of copper, and this had combined with some organic matter in the water and caused them to be poisoned.

The effect of drinking impure water is also frequently shown in the dysentery which develops among the soldiers who encamp in the vicinity of swamps and marshes. In the late civil war, the Union army, while passing through the Chickahominy swamps of Virginia, suffered very much from dysentery. The water which they drank was mostly surface water. When a well was sunk, it seldom exceeded ten or twelve feet in depth, and the water always had a brackish taste, and frequently emitted a foul odor, especially if it had been allowed to stand in a vessel for a few hours.

The same impurities which produce dysentery are closely allied to those which develop diarrhœa. The fact that dysenteric stools can propagate disease, render it quite probable that, as in the case of typhoid fever and cholera, the accidental passage of dysenteric evacuation into wells may have some share in spreading the disease.

To the late Dr. Snow, of England, are we indebted for valuable researches relating to the dissemination of some diseases by the use of water for domestic purposes.

Malarious fevers are very prevalent in the vicinity of marshes.

It was Hippocrates who first asserted that those persons who drink the water of marshes suffer from an enlargement of the spleen. Other writers have not only confirmed this fact, but claimed that it generated fevers.

One very important circumstance is the rapidity of the development of malarious disease, and its fatality when introduced by water. We have the same result in the case of diarrhœa and dysentery. Either the fever-producing cause must be in larger quantity in the water, or what is equally probable, must be more readily taken up into the circulation and carried to the spleen, than when the same cause enters by way of the lungs. That typhoid fever may be developed by the use of impure water, as well as impure air, is a theory of quite recent origin; although as far back as the middle of the last century, one German physician advanced a similar opinion.

Dr. Flint in his clinical reports on continued fevers in 1852, alludes to an outbreak of typhoid fever, which occurred in North Boston, Erie county, N. Y., in 1843, and this was attributed to the contamination of the water by the contents of a sewer passing into it. That water may be the medium of propagating typhoid fever, has been proven by the evidence of many English physicians and German authorities, such as Profs. Budd, Jenner, Wilkenson, Barclay, Seaton, Latham, Muller, Richter, Burkhardt and Wohlial.

Profs. Clark, Metcalf, Loomis and others of this country, have fully corroborated the views of these distinguished English and German physicians.

One English authority states that in cases where the poison is conveyed by water, the infection seems to be much more certain; and he has reason to think that the period of incubation is materially shortened.

The question may sometimes be asked, what is the proportion of cases of typhoid fever that are disseminated by the use of impure water, as compared with those that are caused by the inhalation of impure air? While no positive answer has yet been given to this question, yet it has been observed that when the dates of attacks are given, the incubation period in those who have drunk impure water appears to be very short; while it is probable that it takes from eight to ten days after the typhoid poison has entered with the air before the early malaise comes on; yet in some cases of typhoid fever produced by water, only two or three days were observed to elapse before the symptoms are marked. Will decomposing sewage in water produce typhoid fever, or must the evacuations of a typhoid patient pass into it?

This is part of the larger and important question relating to the origin and propagation of specific poisons. How often, everything is attributed to fæcal matters merely, without searching for other causes, which may be as potent as this, in the development of typhoid.

A recent number of the Berlin *Klinische Wochenschrift* contains an account of five cases in which infected water was the undoubted medium of contamination. A miller living on the bank of a small stream, was attacked with typhoid fever. His excreta were thrown daily into a small pond which was connected with the stream by a ditch. This man recovered, but seven weeks afterward, his brother, who alone nursed him, became ill with symptoms of typhoid. The discharge from the bowels were very profuse, and were, as in the other case, thrown also into the pond.

A few days afterwards four laborers, who were employed in a forge about one mile distant, were attacked with typhoid, and the medical attendant, anxious to discover the source of the mischief, found that all of these men obtained their drinking water from the stream in question, there being no well accessible. Another case also occurred, the patient being a farm laborer, who worked in a meadow near the forge, and also drank water from the same rivulet. No case of typhoid had occurred in this vicinity for a long time previously, and all the circumstances were in favor of the supposition that the disease had been transmitted through the medium of the water. There was no evidence as to the source of infection of the first patient, and the period of incubation was extremely long, particularly in the case of the brother. The history of this small epidemic tends to support Dr. W. Budd's view, that a specific agent must be present, for the production of typhoid fever. No doubt the water in the rivulet alluded to, often contained more or less ordinary fæcal matter. May we not infer from this, that the excreta of typhoid patients should be thoroughly disinfected, and when possible, as in country districts, should be deeply buried in places far removed from any source of water supply? The London *Lancet* has quite a full account of an outbreak of typhoid fever, in Glasgow, Scotland, and the source of infection was traced to the supply of milk from certain dairies; after the death of two prominent citizens, the sanitary officers of that city began an investigation which traced the contaminated milk supply to two large dairies. Though these circumstances were known, it was reserved for another medical officer conclusively to show that the two dairies in question were fed by a constant supply of water from an adjoining farm, where typhoid patients had lived for several weeks previous; and that the sanitary arrangements of this farm were very defective; that the excreta of the patients were thrown into a channel into which the water ran that supplied the two dairies.

The water with which the dairy vessels were washed was obtained from the same supply. One hundred and sixty-three cases of typhoid were developed among the customers of these two dairies, and the death rate was about 10 per cent. Of seven students at the university who had the fever, three died. Should not these melancholy facts lead to the proper and periodic inspection of town dairies and their country feeders? It is not a very pleasant thought to realize that disease may unwittingly be brought to our doorsteps every morning through the single medium of the most essential of all nourishing fluids for family use!

In one of our Western asylums, which had been supplied with water from an artesian well and several cisterns, the rapid increase of the population required a more abundant supply, and an iron pipe was laid to connect with an inland lake. This lake was fed by a river which received its supply from an extensive marsh. The sewage of the asylum, State university and many private residences was discharged into this lake.

The use of the artesian well and cistern waters were discontinued in the wards of the asylum about May, 1, 1877, and a very abundant supply of water was obtained from the lake.

No malarial nor typhoid fevers had developed in the wards of the asylum, while the artesian and cistern waters were in use.

About one month after the lake water was introduced, a case of well marked typhoid was developed in one of the male wards. The patient died on the morning of the 21st day from the attack, having had a hæmorrhage from the bowels in the evening of the 19th day.

Other cases of intermittent, remittent, typho-malarial and typhoid fever continued to develop during the summer and fall, and also during the winter months. The fever appeared both in male and female wards, and patients and employes were alike attacked by them.

Some cases of typhoid were accompanied with severe gastric symptoms, which seemed to baffle all remedies. In one case, that of an employé, the gastric symptoms were very severe, and for about ten days both medicine and nourishment were rejected. There was also a persistent diarrhœa, with marked tympanitis. Subsultus was present, and during the third week there was a wild delirium. A hæmorrhagic discharge from the bowels occurred in the evening of the 19th day, which had been preceded by a severe chill. He died on the morning of the 21st day.

In many cases of intermittent and remittent, as well as typho-malarial fevers, the patients had epistaxis and pharyngitis. All the cases of typhoid had a diarrhœa, and those of the male patients who had hæmorrhagic discharges from the bowels, died. Petechia was present in all cases of typhoid. From June, 1877, till June, 1878, there were in the male wards 30 cases of intermittent, 11 cases of remittent; 4 cases of typho-malarial; 12 cases of typhoid. Total, 57. Population of male wards about 188.

Two patients died of typhoid, and all the others recovered.

In the female wards, there were about the same number of cases, but a slight increase of deaths. From June, 1878, until August, 1878, there were fifty cases. Six of these were well-marked cases of typhoid, and two of them died. At first it was thought that this endemic of malarial fevers was due to the marsh, which approached to within one mile of the asylum, at the point where the river emptied into the lake, but the continuance of the fever during the winter months, and its rapid development in the spring, naturally led to a microscopic and chemical examination of the water of the lake. From the large quantity of sewage matter that was being daily discharged into the lake from the asylum (and this was impregnated with the fever poison from the excreta of the patients), and the several sewers of the city of Madison, it was not surprising to find organic matter in the water. The sewer from the asylum discharged its contents into the lake about 900 feet from the end of the water pipe.

The water examined with the microscope was drawn from the tanks at 6½ a. m., and after the water cocks had been open half an hour. It was pumped into the tanks at 5 a. m. The following, infusoria, animalcules, protozoa, rhizopods, rotifers, vibriones, and many microscopic forms of vegetable life, together with organic matter, were found in great abundance.

ANIMALCULES. — Tricoda Lynceus, 4; Vorticella Nebulefera, 5; Zoospores, 2. PROTOZOA.—Actinophrys Sal, 8; Amœba, 15; RHIZOPODA.—Cucella Acuminata, 10. ENTOMOSTRACA.—Daphnia Pulex, 13. ROTIFERA.—Rotifera Vulgaris, 16. VIBRIONES.—Vibriones, 14; Oscillaria Lawes, 7. Tubular prolongation of pigment cells, 21.

MICROSCOPIC FORMS OF VEGETABLE LIFE.

DESMIDIACEA.—Pediastrum Granulatum, 1; Fungi, 12; Puccianii Grammi, 18. DIATOMACEA.—Surrilla Constricta, 6; Surrilla Striatula, 11;

Mastoglia Smithii, 9; Cocconema Lanceolatum, 3. Organic matter, 20. Decaying vegetable matter, 17. Volvex Globiator, 19.

Infusoria or infusory animalcules are found almost universally in infusions of organic matter.

Vegetable matter, portions of woody fiber, small bits of roots and parenchyma were found. Some of the vegetable tissue was more or less decomposed, and dark, opaque, structureless masses were seen. Sewage matters, having a darkish brown or reddish color, and very frequently seen in globular masses, and thus distinguishable from the flattened vegetable matter were found in considerable quantity. Nitric acid applied to the sediment ncreased the redness of the deposit of organic matter. This is Hassel's test for organic matter, who first recognized these little ocherous masses, and thought them to be muscular fiber tinged with bile.

Vibriones or microzyomes are the terms applied to small points or jointed rods, which frequently move with great rapidity, and then become quiet or motionless. Some make a distinction between them, while others consider the terms as synonymous.

Their presence indicates the existence of an organic, carbonaceous substance, a nitrogenous substance and a phosphate. Bacteria is a term also applied to the above. This latter may originally exist in the water or be introduced. Burden-Sanderson claims that they cannot be introduced from the air, and that they are sometimes so small as not to be detected by the highest microscopic powers, or by the test of Tyndall with the electric beam. While it has not been conclusively shown that bacteria or vibriones are in themselves hurtful (although some observers think they are), yet their presence indicate the co-existence of certain organic substances and putrefaction, and the latter is always dangerous.

Rhizopoda and amœba may indicate, like bacteria, the existence of putrefying substances.

The mere presence of diatoms should not condemn water as being impure on account of their presence. Entomostraca (water flea) are quite abundant in the spring, and being found in so many waters, are not regarded as dangerous.

The rotifera (wheel animalcules) are frequently found, and although not considered as dangerous, yet their existence indicates an impurity of the water. The great number of microscopic objects found in water have led observers to look first for mineral substances, and ascertain by chemical tests their origin and quantity; then to examine the water, by aid of the microscope, for bacteria, fungi, amœba and ova, and small worms and leeches. These latter indicate an impurity of the water, which makes it dangerous for drinking or culinary purposes.

The various forms or kinds of infusoria, diatoms and algæ are important in connection with microscopic evidence of decaying vegetable matters, and with chemical tests showing much dissolved organic impurity in water.

ARTICLE III.

A CASE OF HYDROPHOBIA, WITH A BRIEF GENERAL REVIEW OF THE DISEASE. By N. SENN, M.D., Member of the Committee on Surgery. Read before the Rock River Med. Society, May 21st, 1879.

On April 10th, I was called to see Mr. P. S., residing in this city. He was 30 years of age, Norwegian, and a sailor by occupation. He was a man of temperate habits, and with the exception of occasional attacks of indigestion, had always enjoyed good health. On my arrival at the house, I found the patient sitting in bed and elicited the following history: He had felt well and continued to work until the evening previous, when he felt a vague pain through his left ear, with a general feeling of malaise, and began to experience considerable difficulty in swallowing fluids. He had spent a sleepless night, the difficulty in swallowing increasing rapidly. He was very excitable and answered my questions hurriedly. Besides difficulty in swallowing, he complained of a sense of tension in the upper part of the nasal fossa. Pulse 96, full but soft; temp. 38.4°; pupils normal in size, responded promptly to light. I handed him a glass of water, the sight of which appeared to excite severe spasms of the laryngeal muscles and tremors of the extremities. An attempt to drink increased the paroxysms, and had to be abandoned after repeated fruitless efforts. Mistrusting the character of the disease, I cautiously inquired to ascertain the possibility of infection by a rabid animal, and ascertained that a dog belonging to the family had sickened and died seven weeks before; that a neighbor's dog was now suffering in a similar manner, and that the patient had administered remedies to the sick dogs at different times, not being aware of the nature of their disease. The continued gagging and efforts at swallowing on the part of the brutes led the people and the veterinary surgeon to believe that a bone had lodged in the throat. At a subsequent visit, I learned that the first dog, when he had been sick for two days, licked a small abrasion on the patient's left ear.

Although I had never seen a case of hydrophobia, from the history of the case and the characteristic symptoms, I was firmly convinced that the patient was suffering from this terrible malady, and informed his friends accordingly, cautioning them at the same time in regard to the danger of infection. As light, noise and currents of air appeared to exaggerate the symptoms, I directed the patient to be kept quiet in a darkened room, with a limited number of attendants; I prescribed opium in liberal and frequent doses to produce rest, and small pieces of ice to allay thirst.

April 11, 8 a. m.—Found the patient in a state of uncontrollable restlessness; he had slept none during the night; the attendants were unable to keep him in bed; he would walk and jump from one room into another in a fearful state of excitation. He was rational, but despondent, talking freely of the impending fatal result. His eyes were staring and suffused; pharyngeal and nasal mucous membrane congested, temperature 39°, pulse 100. Although the nature of the disease had been withheld from the patient, he appeared to be cognizant of it, and repeatedly assured those around him that they need not be afraid of him as he would not hurt them. As the sight of fluid invariably increased the spasm, I directed that the fluids should be placed in a cup and taken through a rubber tube; this device seemed to render deglutition more easy. Attempting to drink, the patient would jump forward, stand firmly on the floor, hold his head to one side and convulsively grasp the cup and tube, then make a desperate attempt to swallow which would generally fail, the next two or three efforts were more successful. Solid food was masticated and swallowed readily. Sometimes the fluids that had apparently been swallowed would be forcibly ejected before reaching the stomach. I now directed the following powder to be taken every two hours:

Camphora	133
Morphia sulphas	02

with a liberal allowance of brandy (alcoholic stimulants were swallowed more readily than water).

Several physicians were called in consultation during the day, most of them corroborated the diagnosis and endorsed the treatment.

12 m.—The symptoms were greatly aggravated, the expression of the face indicated an indescribable distress; there was hyperæsthesia of all the senses, the least touch, a current of air, noise, a bright light or any slight disturbance of the patient was sufficient to cause terrible convulsions. The patient never remained in any one place or position longer than a few minutes, and talked in an excited manner, alluding frequently to the intensity of his sufferings. A copious secretion of viscid mucus from the pharynx and mouth was the cause of constant hawking and spitting. It was only by the most powerful efforts of the will that he was able to swallow small quantities of fluid. Spasmodic contractions of the muscles of respiration occasioned a feeling of suffocation, and of pain in the epigastrium.

9 p. m.—Although the medicines have been administered regularly, they have secured no rest. The patient is in a state of constant agitation. Countenance is livid, extremities cold, skin covered with a clammy cold perspiration, pulse 160 and almost imperceptible, delirious, deglutition almost impossible. The patient continued in a state of restlessness, being tormented with almost uninterrupted spasmodic contractions of different parts of the body until midnight, when death, seemingly from exhaustion, came to his relief. Six hours after death I examined the corpse. The whole surface presented a dark blue appearance, rigor mortis was well marked. The abrasion on the left ear, through which infection had undoubtedly taken place, had healed without a scar

and the ear presented no other abnormal appearance. This case, the first I had ever seen, and, I believe, the first ever observed in this city, led me to look up the literature of this rare disease, for a report at this meeting.

Hydrophobia, rabies canina, or, as it is sometimes called, lyssa, is a disease peculiar to the canine species of animals — as the dog, wolf, fox, hyena and jackal — in whom it may originate spontaneously, while in other animals and man it only occurs by means of the transmission and inoculation of a specific virus.

It is an acute, infectious disease, characterized by a functional disturbance of the nervous system, unattended by any appreciable constant anatomical lesions.

The disease was known to the ancients, and we find frequent allusions to it in the writings of poets and historians, as well as in medical works. Aristotle refers to it in his great work, "Historia Animalium." Galen declared it to be the worst of all diseases. Plutarch regarded it as a new disease, which took its origin during the time of the Asklepiades. Coelius Aurelianus, a contemporary of Augustus, wrote the first book on this disease. It has been described by Celsus, Dioscorides, Plinius, Soranus, Paul of Ægina, Aracteus Cappadocius, Ætius, Rhazes and Serapius. Among the later investigators to whom we are indebted for a more accurate knowledge of this disease, we may mention prominently Maynell and Youatt.

In the human subject the disease never originates *de novo*, but is always the result of inoculation with a specific poison. Infection, in the majority of cases, is due to a bite of a rabid animal, usually a dog, although it may take place by absorption of the virus, when brought in contact with an abraded surface, as was the case in the above instance. Large wounds, as a rule, are less dangerous than small ones, from the fact that in the former the virus is more likely to be washed out by the flow of blood. The specific infecting principle of hydrophobia is contained in the saliva and foam of the infected animal; also in the blood and salivary glands, and perhaps in other tissues of the body. Of its physical properties we are at present ignorant. The virus is reproduced in the infected system, and is distinguished from other poisons by the fact that it remains latent in the organism for weeks or months, without producing any morbid symptoms. The probabilities of contracting the disease after being bitten by an animal known to be rabid, are about equal to those of infection from other causes. According to the statistics of Tardieu and others, about 47 per cent. of those bitten die of hydrophobia. If we include bites of dogs suspected of being rabid, the proportion is even more favorable, only 8 per cent. terminating fatally. It is very doubtful if any reliable cases are on record in which human beings suffering with the disease have communicated it to others by their bite; the possibility of infection however, cannot be denied. It has been asserted by some that the disease is simply a nervous affection, induced by anxiety and apprehension of the dreadful disease, and consequently that it is not produced by a distinct virus. This is contradicted by the fact that the disease has been observed in children two years of age, whose imagination cannot be wrought on by a fear of the disease. One of the physicians who visited my case, sought to explain the symptoms on these grounds, but the patient was not aware of the character of the disease affecting the dogs until the symptoms had fully developed in himself. The frequency of hydrophobia in man depends on the degree of prevalence among animals. In France, in six years, from 1853 to 1858 inclusive, there were 107 cases in a population of 36,000,000, or one annually for every 2,000,000. In the city of New York, during six years, from 1866 to 1871 inclusive, with a population of 1,000,000, there were 22 cases, or an average of 3⅔ per annum. In Prussia there occur annually, on an average, 71 deaths from rabies. In Austria, on an average, 58 deaths take place annually from the same cause.

Period of Incubation. — By the period of incubation, we understand the period of time which elapses from the time the virus is brought in contact with a wounded or abraded surface until the first symptoms of disease manifest themselves. It is the time during which the poison remains latent in the system or at the point of introduction. It varies greatly in different cases. According to Boudin, in 147 cases it lasted:

1 month in 26 cases.
1 to 3 months " 96 "

3 to 6 months in 19 cases.
6 to 12 " " 9 "

In the majority of cases it terminates at the end of the second month. The variation in the length of time the poison remains dormant, has not as yet been sufficiently explained. The popular opinion, shared to a certain extent by some of the older writers, that the disease may manifest itself even after several years from the time the poison was introduced, is fallacious, and has given rise to a great deal of unnecessary mental anxiety. If no symptoms manifest themselves after a lapse of six months from the time supposed inoculation took place, the person may be pronounced practically safe. During this stage there are no symptoms indicating that so appalling a malady is in process of development. The wound heals kindly, even after the application of caustics.

Symptoms.—When the disease begins to manifest itself, the cicatrix often becomes swollen and reddened, and sensations of prickling, boring or tearing pains are experienced in the wounded parts or in adjacent tissues. In my case the patient complained of pain in the ear and the same side of the face several hours before any other symptoms had shown themselves. The characteristic signs of the disease come in rapid succession. The patient complains of languor, and a feeling of stiffness about the neck, extending to the jaw and base of the tongue. He is affected with great restlessness, and an indescribable anxiety. Thirst is extreme, but, owing to the distress occasioned by an attempt to swallow fluids, there is an aversion to liquids. Solid food is generally swallowed without much difficulty. The mouth at first is dry, and the salivary secretion diminished. In some cases vomiting is an early symptom; the bowels are generally constipated and the urine scanty. The special senses are morbidly sensitive; light, sound and other external impressions produce an exaggeration of symptoms. Sexual desire, more particularly in the male sex, is increased during the early accessions of the disease. At the onset the pulse is somewhat increased in frequency, and the temperature higher than normal. The patient is inclined to talk almost constantly, frequently changing the subject of conversation. The nervous excitation increases rapidly in severity, until convulsions of a paroxysmal character occur; these are usually preceded by spasmodic constrictions of the pharynx. Instead of a dryness in the mouth, a copious viscid secretion now distresses the patient, who, on account of difficulty in swallowing it, ejects it forcibly in every direction. Although mental illusions and hallucinations occur during the convulsive attacks, during the intervals the mental faculties are for the most part retained. The continued convulsive movements, the loss of sleep, and the inability to take nourishment, rapidly exhaust the strength of the patient. The pulse becomes more rapid, the extremities cold, the skin livid, the eyes suffused, the convulsions follow at shorter intervals, although perhaps less in severity, a cold, clammy perspiration makes its appearance, symptoms of exhaustion become more and more apparent until death closes the scene.

Diagnosis.—The only diseases which might be mistaken for hydrophobia are hysteria and tetanus. The use of the thermometer will exclude hysteria with certainty, as the temperature in this disease when uncomplicated, is normal, and in hydrophobia is always increased. Tetanus in many respects resembles hydrophobia. In both diseases the reflex function of the spinal cord is increased; both prove ordinarily fatal in a few days; both present violent paroxysmal convulsions, increased and excited by external irritating influences. In the essential features they are, however dissimilar. In tetanus deglutition may be difficult, in hydrophobia it is next to impossible. In the former, respiration may be more difficult; in the latter the spasms of the respiratory muscles are almost as conspicuous as the spasms of deglutition. In hydrophobia a viscid mucus accumulates in the mouth provoking frequent spitting; constant thirst is a distressing feature; the patient is more irritable and restless; there is tremor of the muscles and the spasms are more often clonic instead of tonic. If, in addition to all this, we are able to ascertain the infliction of a bite from a rabid animal, a few weeks or months previous to the attack, the diagnosis remains no longer doubtful.

Prognosis.—According to our best informed and most reliable authorities, the disease proves fatal without exception. Death takes place usually on the second or third day. The patient may die in the midst of a paroxysm from apoplexy or asphyxia, but most frequently it takes place from exhaustion after a state of collapse. It is true cases have been reported where it has been claimed that recovery occurred, but the possibility of an error in diagnosis in these cases must always be taken into consideration. Faber collected the histories of 19 cases where recovery is said to have taken place. One case is reported by Hanauld, as cured by means of the cold douche continued until syncope was produced. Ottman and Falkner each report a case treated by mercurial inunction. Sauter reports two cases which yielded to the administration of belladonna, and Dr. Watson claims for the hypodermic injection of woorara the same beneficial results. As regards the prognosis of bites by rabid animals, this is influenced by the locality of the wound, and the kind of animal inflicting it. A bite of a rabid wolf or fox is more dangerous than that of a dog. According to Baulley, of wounds of the face, 90 per cent. proved fatal; of the lower extremities, 28 per cent., and of the upper extremities, 20 per cent. When immediate cauterization is practiced, 33 per cent. of those bitten by rabid animals die of rabies, while in cases where no such precaution is practiced, 83 per cent. prove fatal.

Pathological Anatomy.—Early and well marked rigor mortis takes place after death. The blood is fluid and dark, its coagulability being greatly diminished. Although the symptoms during life point directly to the nervous centers, and more particularly to the spinal cord as the seat of lesion, no distinct and constant pathological changes have been observed.

Pathology.—The disease undoubtedly depends upon the introduction into the circulation of a specific poison, which is reproduced in the body. As yet the location of the poison during the period of incubation has not been determined. The greater number of observers believe that it remains latent in the cicatrix until active symptoms begin to develop themselves, while some are of the opinion that it is immediately introduced into the circulation, and after it has reproduced itself to a certain extent it produces the characteristic symptoms. I am inclined to adopt the latter theory as correct. If the former were correct, the poison might remain innocuous in the cicatrix for an indefinite period of time. The one way to explain the variable length of the period of incubation, is to assume that the reproduction of the poison is not carried on with the same rapidity in different individuals. The same discrepancy in this respect is observed in some of the other infectious diseases. The poison, when fully developed, seems to expend all its force in disturbing the reflex functions of the cord.

Treatment.—This divides itself into the prophylactic, palliative and curative. The prophylactic treatment consists in removing or destroying the virus in the wound. For this purpose the practice of Cornelius Celsus has been little, if any, improved upon. He says: "The virus should be withdrawn by means of a dry cupping-glass, and the actual cautery applied to the wound; if this be impossible, then other caustic agents should be applied and the parts should be bled." The bleeding of the wound should be encouraged. Besides the actual cautery, various chemical substances have been used at different times, as caustic potassa, nitrate of silver, antimony, ammonia, mineral acids, for the purpose of destroying the poison in the wound. Cauterization has also been practiced after the wound had completely healed, and, according to Harder, Hicks and Griesly, has been found of benefit even after the disease had made its appearance. Virchow recommends Vienna paste as the most reliable caustic. Excision of the wound has not been found more effective than cauterization, and as it is more difficult to perform, it should not be resorted to as a rule. If the punctured wounds are deep, it may be necessary to enlarge them to facilitate the application of the caustic. No internal remedies have been found of avail to neutralize the poison during the period of incubation, and thereby preventing the development of the disease. Of the innumerable popular and secret remedies, none have answered this expectation. After the disease has become fully established, our efforts must be directed mainly towards palliation. The present state of medical science has no claim to a curative remedy. Venesection, transfusion, intra-venous injection of warm water, mercurials, belladonna, arsenic, hydrocyanic and carbolic acids, the subcutaneous injection of woorara, atropia and quinine have all been tried for this purpose, but in vain. As palliatives to allay spasm, relieve pain and procure rest, opium, chloroform and chloral may be used either separately or in combination. When the chemist or microscopist has isolated the specific poisonous principle, then the therapeutist will go to work intelligently and find some agent that will destroy it or neutralize its effects, and thus eradicate from our death-list the most appalling and fatal of all diseases.

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Article IV.

The Process of Inflammation. By Kate C. Bushnell, m.d., Chicago.

The phenomena of inflammation are most commonly studied by means of the microscope, in the tongue or mesentery of the frog, after injury by artificial means. They present themselves as follows:

The immediate result of the injury — if not too severe — is a spasmodic contraction of the blood-vessels. This is followed directly by a well-marked dilatation. The primary contraction may be absent, but the dilatation is never absent. It is, therefore, the first characteristic phenomenon observed, and is succeeded by an accumulation of white blood-corpuscles, or leucocytes, in the vicinity of the injury.

We next notice a slowing, then oscillation, and later, complete stasis of the blood current.

At this time the vessels become very irregular in outline and tortuous in direction. There is also a cloudy appearance of the tissues, and the parts are moist from the effusion of plasma about the seat of the injury. This association of phenomena, resulting from irritation, we call inflammation, and its striking physical sign is redness.

Examining the parts more closely, we find the tissues are studded with small, round corpuscles, resembling the leucocytes seen in the vessels.

Indeed, we might, by patient watching, see the leucocytes make their way through the walls of the capillaries into the surrounding structures. This passage of corpuscles through the capillary wall has been appropriately designated diapedesis.

After a time, varying from a few hours to several days, we find that the result of the inflicted injury is either resolution or suppuration.

In the former case, the blood current begins to move again, and the leucocytes are either carried away as leucocytes, or disintegrating, are absorbed and finally excreted from the system as waste matter.

In the case of suppuration, the corpuscles that have accumulated in the tissues surrounding the blood vessels rapidly proliferate and make for themselves a nidus by compressing and destroying adjacent structures.

And here we have an explanation of the swelling and pain that accompany inflammation. The swelling is caused by congestion and the abnormal growth of cells in the part. The pain results from pressure by the abnormal growth upon the nerve fibrils, and also from the disintegration of these fibrils in the general destruction which follows. Now this new growth, suspended in the plasmatic effusion, constitutes pus.

Nature generally forms a protecting membrane, by which this pus is separated from healthy tissue.

The resulting abscess may discharge spontaneously or be opened by artificial means; or the liquor of the pus may be absorbed, and the corpuscles, confined in their membrane, may disintegrate and form a cheesy deposit.

Should the abscess discharge its contents, the process of inflammation is completed by a growth of new tissues to fill the resulting cavity.

We have described the causes of three of the cardinal symptoms of inflammation: redness, swelling and pain. The cause of the fourth symptom — that of heat — is not so well understood. Owing to the fact that the temperature of an inflammatory focus is frequently higher than that of the blood which supplies it, the intense heat cannot be due simply to the determination of blood to the part, but must be produced locally. Probably it arises from the active change going on at that point.

We will now discuss the obscure points connected with inflammation, and see to what extent we can account for the phenomena observed. But in order to do this intelligently, it will be necessary to turn our attention for a short time to the histology of the structures involved — particularly the smaller blood-vessels. They are derived from the middle embryonic plate. Their inner layer is identical, as to structure, with the serous membranes, being covered with a peculiar cell called endothelium ; these cells or plates are polygonal in shape, and united at their circumferences. Between these plates — especially in the smaller arteries and veins — there are minute pores or stomata. They appear as if produced by a failure on the part of the endothelial plates to fit closely into each other.

The capillaries are entirely made up of this single layer, and are destitute of muscular fibers. During circulation, their caliber is regulated, to a considerable extent at least, by the amount of blood in the arterioles.

Around the capillaries, and also around the smaller arteries and veins, perivascular spaces have been recently demonstrated. They form small channels. which seem to be the beginning of the lymphatics. The caliber of these plasmatic channels is not large enough to admit the blood or lymph corpuscles. Besides this system, I believe there exists another set of channels, leading from the capillaries to the nuclei of all surrounding tissues.

The middle coat of the arteries and veins is a transverse muscular layer. Replaced by elastic tissue in the arteries of largest diameter, it is gradually developed as we approach the arterioles ; it then diminishes again, and in the smallest arterioles traces of it only can be found, as single, nucleated, spindle-shaped fibers wrapped around the endothelial layer. This muscular layer is entirely wanting in the capillary system; but as these vessels emerge into venules, it again appears, and is found highly developed throughout the venous system.

The blood-vessels are supplied by the vaso-motor portion of the sympathetic system. These fibers, which pass to the vessels, are non-medullated, and ganglia in connection with them are found in the muscular walls of the arteries and veins. These ganglia hold no unimportant place in the mechanism of circulation.

The distribution of the nerve-fibers is as follows: A nerve approaches a vein or artery, and divides into two branches, one of which crosses the vessel, and then the two accompany it on either side. These branches give off fibers which unite to form a plexus about the vessel, and from this plexus is given off another set of finer fibrillæ, which terminate in the vascular wall itself.

These nerves are both sensory and motor, and various functions have been abscribed to them.

We are quite sure of one function, at least: that is, the maintenance of vascular tonus. This condition is brought about in the following manner: the continual flow of blood through a vessel produces an impression which is conveyed to the neighboring ganglia by sensory fibers; thence it is reflected along motor nerves, causing a rigid condition of the walls of the vessel.

Applying our knowledge of the distribution and function of the nerves of the blood vessels, we can readily see how in the early stages of inflammation, interference by irritation might cause, in the first place, spasmodic contraction of the vessels followed by loss of vascular tonus resulting in dilatation or, at least, a flaccid condition of the vessels.

But we have stated that the early symptoms of inflammation are dilatation with acceleration of blood current. While the natural tendency of dilatation would be a slowing of the blood current. So that we must find a better cause than simple dilatation.

This dilatation and acceleration has been accounted for by the theory of collateral circulation. When some of the arterioles of a part are occluded or obliterated by injury, there will be an increase in pressure and blood-flow in the neighboring patent vessels. Doubtless such is the case when the injury is so great as to mangle or destroy the tissues, but very frequently in inflammation no such condition of things obtains. So that this explanation will not cover the whole case.

Goetz, Freusberg and others have been recently trying to demonstrate the existence of so-called vaso-dilator nerves. Should nerves of such function be proven to exist, the explanation will seem quite simple, for active dilatation of arteries would be quite liable to result in just the phenomena under discussion.

There is another very excellent theory advanced to explain these symptoms of active congestion. It is the theory of peristaltic action of the vessels, especially under irritation.

This kind of movement has been proven to exist in the blood vessels of some of the lower animals, and assists essentially in the propulsion of the blood. It has also been observed in the lymphatic of man.

If we adopt this theory, the whole process can be accounted for without difficulty.

First, the irritation from injury excites the arterioles to active peristaltic action, propelling the blood more rapidly through the vessels, and the disturbance in the vascular tonus allows the vessels to become greatly distended. At the same time, the plasmatic channels which connect the blood and lymph vessels dilate also, and there is a rush of the blood stream through the arterioles into the capillaries, widely dilating them, and thence the serum, particularly, passes through the stomata into the perivascular spaces and adjacent tissues, leaving the leucocytes collected in abundance in the vessels. There are other causes for the determination of leucocytes to these parts. In the normal circulation it can be readily observed that the leucocytes move slowly along, clinging to the wall of the vessels, and after injury this tendency is exaggerated, either by structural changes in the walls of the vessels, the corpuscles themselves, or perhaps both, so that they are easily hindered in their course. Beale states that the nuclei of the endothelial plates, under the abnormal stimulation, grow to such an extent as to project into the vascular tube and obstruct the leucocytes. The leucocytes thus block up the way, and the vessels become more and more distended and tortuous in direction.

The spasmodic peristaltic action soon becomes inefficient on account of the great mass of leucocytes clogging the vessels, and it is here that we recognize the to and fro movement of the current, until finally the effort is given up through exhaustion on the part of the nerves, and the blood ceases to move. After awhile the nerves may regain their vigor, and all at once the blood stream starts forward. It stops again, and this phenomenon is repeated several times. The circulation is again established, the leucocytes are gradually carried away, and the process ends in resolution. However, quite frequently the process is carried to a greater extreme.

At the time that exudation of plasma, and oscillation and stasis, are going on, very interesting changes may be observed in the conduct of leucocytes that will indicate that the injury is to result in suppuration. Arrested in their flow through the vessels, the leucocytes find time to take on new characteristics.

They multiply and exhibit the peculiar amœboid movements, and as the blood serum escapes through the widely dilated stomata into the plasmatic channels and surrounding tissues, the leucocytes also escape and are seen to crawl away from the vessel by amœboid movement. They are either crowded through by the impulse of the corpuscles of the passing blood stream, are carried through in the current of the escaping serum, or creep through by virtue of their own power of movement.

It is very evident that there is a mechanical cause for the exudation of serum during inflammation. But the effusion is said also to result from over-excitation of the trophic nerves. How these nerves act is still a mystery. But it is not a disputed question that certain nerves, cerebro-spinal in origin, when irritated, cause derangements in the amount of nutritive fluid supplied to a part. We have familiar illustrations of these disturbances in herpes at one extreme and decubitus or bed sores at the other.

The leucocytes, once escaped into the tissues and bathed in plasma, rapidly multiply, and we have pus as the result.

Do all pus corpuscles come from escaped leucocytes? Cohnheim thought they did; while Virchow contended that they were produced entirely from connective tissue corpuscles.

It is generally believed that they arise from a variety of sources, *i. e.*:

1. They are the leucocytes themselves and their progeny.
2. They are from the nuclei of the endothelial plates of the capillary vessels.
3. Lymph corpuscles also produce them.
4. Beale contends that there are minute particles of germinal matter in the serum of the blood, that grow to form them.
5. They are from the connective tissue corpuscles; and
6. The nuclei of all surrounding tissues, bone, muscle, etc., except perhaps nerve nuclei, give rise to them.

We have described the plasmatic channels that lead from the capillaries to the nuclei of all surrounding tissues. We can easily see how favorable this arrangement is to the production of pus from these sources, when nutritive fluid is carried to them so directly, and, during inflammation, in such abundance.

ARTICLE V.

COMPOSITION AND THERAPEUTICAL USES OF TRUE JAMES' POWDER. By P. O'CONNELL, M.D.

Reference is here had only to the genuine James' powder (*Pulvis Jacobi Verus*), and not to the common substitute, if not worthless compound, which usually goes by that name; I mean the *pulvis antimonialis* or compound powder of antimony of the pharmacopœias.

A great deal of discrepancy exists among the highest authorities with regard to the composition and mode of preparing James' powder. I regret that many attempts on my part to arrive at a correct knowledge of the chemistry of this valuable medicine have not, so far, been as successful as I would wish. Standard works on therapeutics and pharmacy say but little about it. Private correspondence with distinguished chemists and pharmaceutists has not been very successful in removing the veil of secrecy which seems to cling round this article. Beyond saying that it is an antimonial, I know but little that is certain with regard to its composition.

Dr. James, who died in 1776, and after whom the article is named, was the first to prepare this nostrum. The American Dispensatory, edition of 1871, says: "It is prepared by calcining, in an iron crucible, one part of tersulphuret of antimony and two parts of horn shavings, stirring constantly until vapor ceases to rise. Then rub the residue to powder, put it in a crucible with a perforated cover and raise it gradually to red heat, which must be maintained for two hours. Reduce the product, when cold, to fine powder. It forms a white, gritty, odorless, tasteless powder, partially soluble in boiling water, and which solution gives an orange-yellow precipitate with sulphuretted hydrogen. It possesses the general properties of the antimonials, according to the doses in which it is employed, and like them is very uncertain in its operation. It is principally used as a sedative and diaphoretic in febrile diseases, in from one to four grain doses, in powder, every three or four hours." The genuine article is not so definitely known as this; while, so far as my experience of its use has gone (and it has not been small) I find it most reliable in its action. Its tastelessness, too, is a very strong recommendation in its favor, since it can be administered to children however young, when quinine, owing to its bitterness, is obstinately and absolutely refused.

The American reprint of Cooley's Cyclopedia of Practical Receipts, fifth edition, edited by Richard V. Tuson, F.C.S., London, says: "The antimonial powder, or compound powder of antimony of the pharmacopœias, is the preparation which usually passes under this name; but the true James' Powder is a nostrum the pretended secret of the preparation of which is claimed to be possessed by only two parties in the Kingdom. The patent specification of the once celebrated Dr. James runs as follows: 'Take of antimony, calcine it with a continued protracted heat, in a flat, unglazed earthen vessel, adding from time to time a sufficient quantity of any animal oil and salt well dephlegmated; then boil it in melted nitre for a considerable time, and separate the powder from the nitre by dissolving it in water.' It has been remarked that this yields a product totally different from that which Dr. James and his successors have sold under the name. Hence he has been charged with concealing the true formula for his powder, and of publishing a false one in its stead."

According to Dr. Robinson, the original formula for this nostrum, and that still adopted by the vendors of the proprietary article at the present day, is: Tartarized antimony 1 part; pre-prepared burnt hartshorn and calx of antimony, of each 5 parts; carefully mixed together and divided into 21 grain powders. (*Phil. Journ. Pharm.*, vi, 282). Never having witnessed the slightest depression nor nausea, in young or old subjects, follow its use, I do not think the preparation contains any tartar emetic. "Antimonial powder differs from true James' Powder, in which I have found a protoxide of antimony, to which it owes its efficacy, whilst the antimonial powder contains antimonious acid which is inert."—Thompson's London Dispensatory.

Mr. A. W. Gerrard, F.C.S., Teacher of Pharmacy, University College, London, informs me by letter under date Nov. 7, 1878, that James' powder "consists essentially of a mixture of phosphate of lime, antimonious acid, and oxide of antimony."

"From analyses recently made of these specimens of James' powder (Newberry's, Butler's, and a sample 60 years old obtained by Mr. Squire), it appears that antimonious acid was present in varying proportions, from about 45 per cent. to 33 per cent., the amount being greatest in the old specimen; teroxide of antimony was also present to the extent of from 9 per cent. to 1 per cent., the greatest quantity being again in the old preparation; the remainder in each specimen consisted chiefly of phosphate of lime; no trace of tartaric acid was discoverable in any of the specimens."

No two authorities, we see, are agreed as to the composition of this medicine. It contains, according to most writers, protoxide of antimony and antimonious acid. The analyses are, doubtless, correct and therefore to be relied on. The various ingredients, then, found in true James' Powder, with their action and doses, may be summarized thus:

1. Oxide, protoxide, or teroxide of antimony, which is a

grayish-white powder, is used chiefly in preparing tartar emetic and in making *pulvis antimonialis*, of which it constitutes one part in three. It is diaphoretic and febrifuge. The dose is from one to ten grains. It is very unreliable, being sometimes very active and sometimes inert, owing doubtless to differences in the manner of its preparation. It is said to be very mild when well prepared, and deserves, perhaps, to be more used. It is obsolescent.

2. Antimonious acid (synon. antimonic tetroxide). Some believe it is inert; this may fairly be doubted. It constituted about one-half to one-third of the three specimens analyzed by Mr. Squire. To it chiefly, probably, is due the remarkable efficacy of the drug.

3. Calx of antimony. This is a white or grayish-white powder, tasteless and inodorous. It is greatly diaphoretic and laxative. The dose is from one to ten grains. It is not now employed.

4. Phosphate of lime. It is used by some on the supposition that it increases the growth of bone. Believing that it hastens and stimulates the growth of cellus, the French use it largely to promote the union of fractures. Dose from twenty to sixty grains, three times a day.

To what particular ingredient or ingredients this preparation owes its efficacy, I cannot positively say; but I do know that, in my hands, it has proved a most useful as well as reliable medicine. "James' powder is used in both acute and intermittent fevers, and in all febrile and inflammatory diseases. It is more mild and more uniform in action than the antimonial powder of the pharmacopœia. Perhaps no nostrum ever received such extensive patronage from the faculty as James' powder. Dr. James himself was remarkably successful in its use; but whether his success depended upon his powder or on the mercurials and bark which he commonly employed at the same time, is still undetermined."

With the view of determining, if possible, this point, I made comparative trials of James' powder alone, and with the drug in combination with quinine, calomel, and sometimes with opium. Of twenty-two cases of grave sickness, of which I preserved notes, in which the James' powder alone, or combined with the above named drugs, was used, the following is a very brief summary:

Four cases were intermittent quotidian fever in young children; two were puerperal pyrexia; one was pyrexia, following profuse—almost fatal—post-partum hæmorrhage, on the eleventh day after delivery; three were puerperal peritonitis (two acute and one sub-acute of three weeks duration); two were acute puerperal metritis; one was acute peritonitis in a woman the subject of menorrhagia; one was acute metritis and pelvic cellulitis, with effusion; and eight were cases of acute pneumonia, all lobar, some double and some of the entire lung. All made rapid and complete recoveries, with the single exception of one of the cases of acute puerperal peritonitis, when the patient after the subsidence of the peritonitis sank from exhaustion due to pelvic effusion.

In two, of the twenty-two cases, James' powder, calomel and opium combined were used; *in one case*, James' powder, quinine and opium combined were used; *in three cases*, James' powder and quinine combined were employed; *in three cases*, James' powder and opium combined were used; and *in thirteen cases*, the James' powder alone was administered. The thirteen cases in which the James' powder alone was employed, included two cases of intermittent fever, one of puerperal pyrexia, the case of pyrexia following the post-partum hæmorrhage, one of acute metritis and pelvic cellulitis with effusion, one of puerperal metritis, and seven cases of pneumonitis. In these thirteen cases the action of the James' powder alone was just as rapid, and the effect as complete and as satisfactory, as when combined with the quinine, calomel or opium.

The temperature was observed in all the cases with the exception of two of the children suffering from the intermittent fever, in whom, owing to fear and restlessness, I could not note the temperature accurately. The twenty cases gave an average temperature of 39.2°. Their average temperature, after an average use of the drug, every four hours, for three days, was 37.2°. The average temperature of the seven cases in which the James' powder was used *in combination* with quinine, calomel and opium, was 39.1°; and the average temperature of the thirteen cases in which James' powder *alone* was prescribed, was 39.2°. The average temperature, after an average use of the drugs for three days, was, in the seven cases, 37.1°, and in the thirteen cases, 37.2°. The average duration of illness — that is, to the beginning of convalescence — was seven and three-fifths days in the whole twenty-two cases. In the thirteen cases in which James' powder alone was employed, the average duration of the disease was six and eleven-thirteenths days; in the other nine cases, the average duration of illness was seven days.

These facts help to determine that it is *not to the mercurials and bark*, but to the *James' powder alone*, the speedy reduction of the temperature, with complete as well as rapid resolution of inflammatory and febrile diseases, is due.

Quinine is now extensively employed as an antipyretic; but to make a decided impression on the temperature, one to two grams, repeated once or twice in twenty-four hours, are necessary. A few such large doses are certain to induce the disagreeable effects of the drug on the brain, and the patient will complain bitterly of the tinnitus aurium and of his vision. Its very bitterness, too, constitutes no small difficulty and drawback in the administration of this invaluable medicine, which, in the case of children, is well-nigh insuperable. The writer, even, cannot take quinine, owing to the nausea and vomiting which its bitterness induces. With James' powder no such difficulties are encountered, and no disagreeable effects follow its use; while such small doses as 20 to 30 Ctg. to adults, every two, three, four or six hours, as may be required, need not be exceeded, and will produce, but more slowly, the same depression of temperature as 1 to 2 grams of quinine once or twice a day. Being tasteless, it can be taken with or without sugar, by young or old, on the most delicate stomach. Its cost, too, is only about half that of quinine at present rates.

It is diaphoretic, antiperiodic and antipyretic. Its diaphoretic action is gentle and moderate. As an antiperiodic, in the intermittents of children, I find it quite as prompt and as effectual as quinine. As an antipyretic, I notice a steady decrease in the temperature and in the pulse rate as soon as its administration is commenced. It does not, any more than quinine, prevent an increase of temperature when a fresh focus of inflammation is lighted up, such as the implication of a fresh lobe of the lung during the progress of a case of pneumonia. It seems to exercise a specific effect in puerperal inflammations in particular, arresting the morbid action, whether it be a metritis, cellulitis or peritonitis, causing a very speedy and complete *resolution* of the inflammation, with return of the lochia. It appears to exert a very marked beneficial action in pneumonitis also.

CHICAGO, ILLS , July 5, 1879.

CHLORHYDRATE OF PILOCARPINE IN THE PRODUCTION OF PREMATURE LABOR. Dr. Chantreuil. (*La France Médical*, Nos. 28, 30, 33, 34, 1879.

Dr. Chantreuil, at the *Hôpital des Cliniques*, after advocating at length the claims of hydrate of chloral in the treatment of eclampsia and an absolute milk diet as a prophylactic of the same when albuminuria is present, discusses the reliability of pilocarpine in the production of premature labor. Before narrating his own experience, he calls attention to the observations of Massmann, who had twice seen labor produced by the hypodermic injection of pilocarpine, and to the experience of Schauta (assisted by Spaeth) and Kleinwachter, both of whom had witnessed a case of labor brought about by the same agent. The doses employed by these gentlemen varied from 0.07 to 0.053 of the chlorhydrate of pilocarpine. To confront these apparent successes, he adduces the experience of others—in all eight cases—in which much greater doses failed entirely. After narrating the experience of M. Hyervaux and himself on rabbits, dogs and guinea-pigs, and claiming that the success of those who had observed positive results could be explained by other exciting causes, he concludes that it is unwise to rely on pilocarpine to produce premature labor in a case of albuminuria. While admitting that it may assist labor after the dilatation of the os, he himself would exhibit it only with great reluctance on account of its cardiac action.

Clinical Reports.

ARTICLE VI.

MERCY HOSPITAL OBSTETRICAL DEPARTMENT.

Service by DR. ROLER.

Reported by H. M. STARKEY, M.D., House Physician.

Pendent Uterus, Spontaneous Cranioclasm. Septicæmia. Double Phlegmasia Alba Dolens. Recovery.

Julia F., age 22. Irish, domestic, medium size, well formed. Entered hospital Feb. 10, 1879, expecting to be confined in one week. Abdomen is noted as being unusually prominent, which prominence increased rapidly after the time patient expected to be confined.

Labor commenced in the evening of March 1, with very feeble pains. Patient says she has felt no life for nearly a week and thinks that the child is dead, but knows of no reason for this.

March 2, 2 p. m.—Pains are still very feeble. Neither the presenting part nor the os uteri can be touched per vaginam. By external manipulation, the head can be felt high up at the brim of the pelvis on the left side, while the breech is in the lower and dependent part of the abdomen on the right side. The placental bruit can be distinctly heard.

The head was crowded down into the pelvis, and the breech raised. This position of the fœtus was maintained by a binder placed firmly about the abdomen.

7 a. m.—Membranes ruptured and an unusually large amount of fluid escaped. Os about one-third dilated and occiput presenting. Abdomen still greatly distended.

No pains occurred after 10 a. m. during the day, and but one during the night.

March 3, 9 a. m.—Os about one-half dilated. There is an entire absence of labor pains, and we judge that the extreme distension of the uterus produced atony of that organ.

4 p. m.—A few weak pains occurred. The head had now descended to the vulva, and it is found that the child is dead, the head macerated and softened, the right parietal bone overriding the left, and the scalp ruptured. Soon the right parietal bone projected from the vulva and was withdrawn. The brains of the fœtus were removed, and by careful traction for about thirty minutes, the head was delivered. The pains were now entirely absent and a finger was hooked under the arm and considerable traction made in this way. By careful and patient labor in this manner for about forty minutes, the child was removed.

During these manipulations there were frequent discharges of very offensive gas, which passed away at times with such force, when some change in the position of the fœtus allowed an exit as to produce a loud noise similar to flatus escaping from the bowel. A large quantity also of decomposed and very offensive fluid escaped both during the expulsion of the child and after delivery.

The child was considerably decomposed, its abdomen distended with gas, and the umbilical cord nearly destroyed.

The uterus contracted well, expelled the placenta almost immediately, and there was very little hæmorrhage.

The patient's pulse was fairly strong and ninety-five per minute during labor, but soon after delivery her face became blanched and anxious, her respiration hurried and pulse soft, small and 120 per minute. Small and frequently repeated doses of brandy were directed, and quinine Gm. 2-6 every four hours alternately with fr. ferri. chlor. C.C. .5 in C.C. 4 of saturated solution potass. chloras.

Four hours after delivery temperature is 38.1°, pulse 120.

March 4, 8 a. m.—Temperature 38.1°, pulse 132. Complains of no pain. Medicines continued with addition of carbolized injections into the vagina.

March 5.—Temperature 39.5°, pulse 120 and stronger. Feeling a little less prostrated.

March 6.—Little change; temperature and pulse remaining high. Some tenderness over uterus, but no general abdominal tenderness and no tympanitis, but on the contrary abdominal walls are *very* lax, and can be gathered up in large rolls in the hands and have a pecular rough and leathery feel.

March 7, quinine replaced by

Tr. cinchonæ	30	C.C.
Spts. frumenti	120	

Mix and give two teaspoonsful every four hours. Bowels obstinately constipated.

March 8.—Pulse, temperature and general appearance some better. Considerable swelling of labia minora, especially on right side. Laxatives and mild purgatives administered.

March 9.—Little change. Pulse ranges near 120 and temperature 39.2°–39.5°. Bowels only moved after repeated cathartics by mouth and by enema had been exhibited.

March 10.—Considerable improvement. This improvement continued steadily day by day till

March 15.—Temperature 38.4°, pulse 90–100. Sat up a few minutes while bed was made. Very little abdominal tenderness remaining. Complains of some soreness in calf of left leg.

March 16.—Endeavored to sit up, but pain and soreness of calf of left leg prevented. Leg is swelling a little.

March 17. Leg more swollen (though still moderately so) and pain very much increased. Marked tenderness along line of femoral vessels and their continuation down to ankle. Lump in left groin about size of walnut, and a tender swelling can be felt just over brim of pelvis. Applying to affected limb cloths saturated with carbolized zinc solution, as follows:

Acid. carbolicum		50
Zinci chloridum		20
Aqua	30	

Mix.

Giving internally tr. ferri chlor C. C. | 5 in saturated solution of potassii chloralis C. C. | 4 every two hours. Temperature, 39°–39.5°.

March 18.—Temperature, 9 a.m., 38.8°. 9 p.m., 38.4°. Leg more swollen and swelling extends to abdomen. Pain very severe at times.

March 19, 9 a.m. Temp. 39°, pulse 120; 9 p.m., temp. 39.1°, pulse 120. Pain less severe, swelling more marked, especially along line of femoral vessels. Internal remedies continued. Locally, carbolized zinc lotion replaced by liniment consisting of

Spts. terebinthina		
Lin. sapon. camph. āā	25	C. C.
Oleum olivum	50	

The leg is assuming the white and puffy appearance characteristic of phlegmasia alba dolens. March 20, 9 a.m. Temp. 38.7°, pulse 110; 9 p.m., temp. 39°, pulse 111. Leg continues to increase in size, but there is much less pain. The point of greatest tenderness is in the popliteal space, where there is a hardened cord a little to the inner side of the center.

March 21, 9 a.m. Temp. 38.1°, pulse 108. The circumferences of the left leg are: (a) Ankle over malleoli .248 M. (b) Ankle just above maleoli, .235 M. (c) Thickest part of calf, .362 M. (d) Knee, center of popliteal space and just below inferior border of patella, .343 M. (e) Centre of popliteal space and center of patella, .381 M. (f) Middle of thigh, .495 M. Dimensions of sound limb at same time are: (a) .242 M, (b) .197 M, (c) .292 M, (d) .317 M, (e) .343 M, (f) .394 M.

March 22, 9 a.m; Temp. 37.65°, pulse 94. Limb almost entirely free from pain and soreness. The ankle is a little more swollen, but the dimensions of other parts of the limb are all less.

March 23, 9 a.m. Temp. 38°, pulse 100. Circumferences of left leg all diminished, and there is very little pain or tenderness. Some soreness remains in the groin, however. Patient complains of shooting pains through center of calf of right leg, and this point is found to be a little tender on pressure, and there is also a little stiffness of right knee; resembling suspiciously the commencement of the disease in the left leg.

March 24, 9 a.m. Temp. 38.5°, pulse 100. Improvement of left leg continues, but right leg shows more distinctly that it, also, is involved in the same disease. Ankle and calf swelling, very tender at calf and in groin, and very painful.

March 25, 9 a.m. Temperature, 38.3°, pulse 100. Left leg gives very little inconvenience, and dimensions are all the same as were noted two days ago. Right leg less painful, but swelling and tenderness are more marked. Has a milky white appearance, which is particularly noticeable about the ankle. Have for two days used the carbolized zinc solution mentioned before, but this is now changed for the turpentine liniment applied to the other leg.

March 26, 9 a.m. Temp. 38°, pulse 100. Suffers little pain in either leg unless moved, and there is marked decrease in the size of the left leg, except about the ankle, where there is more swelling, as will be seen by the following measurements :

Left—(a) .246 (b) .235 (c) .317 (d) .298 (e) .336 (f) .457
Right—(a) .235 (b) .215 (c) .292 (d) .305 (e) .343 (f) .419

March 27, 9 a.m. Temp. 38.6°, pulse 100. Little change ; still using tr. ferri chlor. internally and turpentine liniment locally.

March 28, 9 a.m. Temp. 38.7°, pulse 98. Pain and tenderness of right leg much diminished, but is more swollen. Circumferences are :

Left—(a) .248 (b) .229 (c) .317 (d). 298 (e) .337 (f) .444
Right—(a) .260 (b) .229 (c) .317 (d) .305 (e) .343 (f) .419

March 31, 9 a.m. Temp. 37.1°, pulse 88. Improvement steady, swelling diminishing in all parts except right ankle, which is more swollen.

April 3, 9 a.m. Temp. 37°, pulse 86. Sits up in bed much of the time.

April 4. Fairly convalescent. Bore weight of body on left foot, but was unable to stand on right foot, and on attempting to do so fell on the floor. Circumferences to-day are :

Left—(a) .248 (b) .216 (c) .292 (d) .298 (e) .330 (f)) .419
Right—(a) .266 (b) .235 (c) .311 (d) .305 (e) .343 (f) .425

Left hospital nearly well.

Was seen April 28. Is sitting up all day, but walking is still a little difficult. Feet and ankles swell considerably in the daytime, but much of this disappears during the night. Was advised to wear an elastic bandage from the toes to the thighs.

Resumed work May 1.

ARTICLE VII.

MERCY HOSPITAL.

Reported by Dr. E. C. HELM, House Surgeon.

I. Obstinate Ulcer of Foot.

D. S., aged 34, entered the hospital March 21, 1879, with the following history :

Three years ago his left foot was crushed between two logs. Part of the heel and nearly all of the superficial tissues on the under and inner sides of the foot were torn away, leaving a large rectangular ulcer. This improved rapidly until the ulcer was about .08 m. square.

In spite of all treatment (including skin-grafting by a Canadian surgeon), this refused to heal.

At date of admission the edges of the ulcer were greatly thickened and indurated and the floor non-granulating. There was very little discharge, the ulcer being exceedingly indolent. No bones are known to have been broken — still the foot is flat. He is a very muscular, apparently healthy man, but is a victim of periodical methomania.

The edges of the ulcer were pencilled with tincture of iodine, and the whole covered with simple cerate. The internal treatment was 2 Gms. of sulphur three times a day.

After two weeks (April 2d), the ulcer meantime not improving, the iodine was discontinued, and firm strapping tried.

April 6th–9th.—Upon returning from a debauch, the foot was worse than ever.

April 10th. — Scarified edges and base of ulcer freely.

April 11th–13th. — Applied tincture of cantharides twice daily with camel's hair pencil.

April 14th. — Ether was administered, the edges of the ulcer were pared, the base scraped, several pieces of skin from the posterior surface of the leg were engrafted and the ulcer dressed with simple cerate.

After forty-eight hours, the dressings were carefully removed ;

only three grafts remained, and these came away twenty-four hours later.

April 23d.—Scarified and grafted again.

April 25th–27th.—Another debauch. Grafts failed. Sulphur discontinued.

May 5th.—Anæsthetized, scarified parts well, and dissected up three large flaps extending from the edges of the ulcer well into the healthy tissues. These flaps were on the anterior, superior and posterior borders of the ulcer. They were left with broad attached bases, and were not twisted or stitched, as their vitality was not assured; but were dressed with simple cerate and bandaged loosely.

May 8th.—All of the anterior and posterior and part of the superior flaps have sloughed.

May 9th.—Directed potassium iodide 5 Gms. three times a day.

May 12th–16th.—Applied cantharidal blisters twice per day, leaving them on continuously. The blisters caused some pain, discomfort and an increased vascularity of the parts.

May 17th–22d.—Dusted on thickly a coating of capsicum twice per day.

May 22d.—Scarified again and continued the capsicum until June 1, at which time there was more redness, and a better crop of granulations than at any time before. Consequently the house-surgeon engrafted fourteen pieces of skin from the forearm, and dressed lightly, leaving the dressings undisturbed for forty-eight hours, at which time the grafts were all in position.

June 5th.—The grafting failed. The ulcer is healing rapidly where the flaps made May 5th were situated, while the original ulcer has changed but little since entering, except that it is very slowly granulating at the base, while the edges are still indolent.

June 6th.—Becoming discouraged he has left the hospital.

II. Epithelioma.

A. N., aged 55, entered the hospital April 9th, with an epithelioma of lower lip, of two years' duration. He could assign no cause for it other than that he was an inveterate smoker, always using a clay pipe. He had endured some pain of a smarting, rather than a shooting character. Last winter the lip was partially destroyed by caustics which were applied by a "cancer doctor."

April 14th.—Ether was administered and a free incision made, cutting out a quadrilateral piece of the lip, taking away fully three-fourths of its substance. The moderate hæmorrhage was readily controlled by the ligature and torsion. Next incisions .03 m. in extent were made from each lower angle of the quadrangle horizontally outwards. Like incisions were made from each angle of the mouth directly outwards, and thus parallel to the lower incisions. The flaps thus formed were separated from the periosteum, brought carefully into apposition, stitched and firmly strapped. There was considerable oozing for two days.

April 21st.—Removed the sutures.

April 30th.—Discharged cured, the wound having closed by first intention, leaving a good lip.

III. Excision of Elbow Joint.

J. M., aged 26, has had trouble with his elbow-joint for three years. He first felt pain while shaking hands, since which time the pain slowly increased, and in six months thereafter an opening was made, giving exit to what he describes as a "sausage-like material." Through the opening or fistula, which remained patulous, a small amount of pus (but a few drops) was daily discharged. Carious bone was detected. He could use his arm very well until last November, at which time he had great pain, and says he "did not sleep for thirteen nights."

The pain continuing, he came to Chicago, under the care of Prof. R. N. Isham. Finding that an operation was necessary, Prof. Isham, on Feb. 15, excised the joint at the college, using the H flaps, and sawing off the entire articular facets of the bones. There was some hæmorrhage, which was readily controlled by styptics.

The patient was then sent to the hospital, and the arm dressed in a semi-flexed position. There was little swelling or pain. The patient remained in bed but two days.

March 1st.—Union by first intention, except at the points at which injections were made, which remain open.

March 15th.—Patient left the hospital to-day. The fistulæ have not entirely healed. Passive motion has been kept up, but there is very limited motion.

April 21st.—Re-entered. Elbow doing poorly; considerable discharge. Dressed antiseptically. Gave tincture of iron internally. His general health is poor.

May 15th.—The fistulæ have healed; swelling subsiding. There is now considerable motion.

June 11th.—Nearly well. Will leave in a few days. Can flex the forearm to nearly right angles with the arm. Pronation and supination are not entirely lost.

NOTES FROM PRIVATE PRACTICE.

ARTICLE VIII.

A Rare Fracture.

On the night of the 5th of May, ult., Dr. F., of this city, æt. 27, called at my office, informing me that there was "something wrong" with his shoulder. He stated that upon getting out of bed an hour before, he had stumbled and fallen to the floor, striking his shoulder against something, which proved to be the edge of a door standing ajar. The pain was so excessive as to render him unconscious for some little time.

Upon careful examination of the part, I could at the outset detect no objective sign of injury. There was inability to place the hand upon the head, and extreme tenderness on pressure over a limited space just inside the acromial end of the clavicle and just below it. No crepitus or deformity was at this time observable. Accordingly I prescribed a hypnotic (morphiæ acetate 2 Ctgm.), and the application of a towel wrung out of hot water, on general principles. No opinion as to the lesion was expressed.

Next morning I called on the doctor, and at once noticed tumescence, circumscribed, at the injured spot, with considerable impairment of function, corresponding to the action of the pectoralis minor and coraco-brachial muscles. It will be remembered that the former is inserted into this process, and also that the conjoined tendon of the latter and of the short head of the biceps arise from its outer border. Crepitation was now quite perceptible. This was doubtless more from rupture of the trapezoid ligament than the separation of the fragments of bone. Indeed, when the relation of this ligament and also of the conoid are considered, it seems to me that this fracture implies the *necessary* rupture of both of them.

When we observe that the coracoid process is epiphyseal, and that complete osseous union does not occur till the twenty-fifth year or even later, this case may be viewed more as a separation than a fracture, perhaps. Hamilton, however, considers such separations under the nomenclature of fractures.

The exceeding infrequency of this injury is obvious from a consideration of the anatomical reasons. Nothing but direct violence of a special kind can cause it. I may add, and it is to be hoped, unassumingly, nothing but direct and close observation will detect it. Erichsen says only about a dozen cases of fractured coracoid are recorded. Mr. Lizars denies having seen a well authenticated case. Bransby Cooper and Dr. R. Mussey have each seen one. Hamilton has seen but one.

In conclusion, I would state that I had the honor to present this unique example, a few days after it occurred, before the Rockford Medical Association, and their opinion entirely concurred with my own as to the diagnosis. Hence the confidence with which I venture to assert the diagnosis.

The patient, it may be added, has but little inconvenience at present, no treatment further than elevation of the forearm upon the chest having been employed.

EDWARD C. HUSE, M.D.

ROCKFORD, June 2d, 1879.

THE Third Annual Session of the American Dermatological Association will be held in the rooms of the Academy of Medicine, No. 12 W. 31st Street, New York, on the 26th, 27th and 28th of August, 1879.

Society Reports.

ARTICLE IX.

PROCEEDINGS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY.

Eighth Meeting, May 23, 1879.

DR. T. D. FITCH in the chair.

DR. EARLE read a paper on tubercular meningitis (published in July number of JOURNAL AND EXAMINER).

DISCUSSION.

DR. MILLER asked if every case of acute meningitis might not be associated with tubercle. He admitted the great difficulty of diagnosis. It was certain, however, that he had witnessed recoveries in cases of meningitis in which there were evidences of tubercle. In the treatment of these cases the speaker believed in shaving the scalp, applying blisters and stimulating all the excretory channels. It was questionable whether bromides were of service.

DR. MERRIMAN mentioned a case of supposed tubercular meningitis, which recovered. He, too, agreed as to the extreme difficulty of diagnosis. Theoretically, he could not understand why recovery from tubercular meningitis should be so infrequent.

DR. BYFORD objected to the name, tubercular meningitis. He thought usually the meningitis preceded the formation of tubercle. Often, however, those two kinds of cases merged into each other, and the diagnosis is thus made extremely difficult. Death in these cases is caused by compression of the brain. Concerning the treatment, he had seen several cases recover under the effects of ergot and quinine. In answer to Dr. Miller, the speaker said he would not administer full doses of quinine when there were evidences of cerebral congestion of a considerable degree.

DR. NELSON accepted Dr. Byford's views as to the real nature of these cases. He alluded to the necessity of an energetic line of treatment: cold applied to the head, quinine in every case of high temperature, ergot, bromides, and digitalis and belladonna to support the heart's action. He adopted the use of blisters, but on account of the disfigurement, which is shocking to the friends in case of death, he used small blisters, on the nape of the neck, behind the ears, and in other concealed places.

DR. SAWYER alluded to the fact that an unusual number of cases had come under the observation of the essayist. He had been led to regard the affection as a less common one. In both the cases which he had seen, the evidences of tuberculosis of other parts of the body overshadowed at first the cerebral manifestations. In one of the cases there were tubercles in the choroid.

DR. DUDLEY spoke of the theoretical use of alcohol in meningitis.

DR. FITCH remarked that the great, distinguishing feature of tubercular meningitis was its slow progress, and its indefinite character. It seems sub-acute from the outset. He thought the majority of the cases reported in the essay were like those of simple meningitis.

CHICAGO MEDICAL COLLEGE.—The following appointments have been recently made to fill vacancies in the faculty of this college: Edward W. Jenks, M.D., LL.D., formerly of the Detroit Medical College, has been appointed to the chair of Medical and Surgical Diseases of Women and of Clinical Gynæcology, and will soon take up residence in this city. Lester Curtis, A.M., M.D., formerly assistant or adjunct to the Chair of Physiology and Histology, has been appointed Professor of Histology. H. Gradle, M.D., occupies the Chair of Physiology temporarily, as Lecturer in that department.

Foreign Correspondence.

ARTICLE X.

LONDON, May 28, 1879.

After many years of carefully studied experience in the treatment of almost innumerable cases of hip-joint disease, a large portion of the very best and most erudite surgeons of London, look upon a *good* result as the sequence of excision of the head of the femur, as by far the exception and not at all the rule. Some do not perform the operation, depending upon rest in bed, constant extension, good food and correction of deformity by graduated pressure, to give better and more permanent recoveries than any resort to the knife. These men have done the cutting operation time and time again in their earlier experience, but the results faithfully interpreted and honestly acknowledged, deduced from the records of extensive hospital practice, and unfortunately numerous post mortem examinations, have led them to avoid active interference in almost every case; making it absolutely the *dernier ressort* and then accepting the necessity with faint hearts and doubting minds as to the good done.

Now if there is one crop of maladies which is reaped with an abundant harvest in the special hospitals for children and in general hospitals as well, in London, it is acute and chronic joint disease, especially the latter; strumous if you prefer, although I noted well the particular care with which each surgeon sought for and elucidated the probable traumatic cause or incident which may have preceded the commencement of the incipient trouble. ending in the chronic difficulty presented for examination. In every instance preference was given to the traumatism as compared with constitutional taint, although the latter was not denied a place in the list of causes, nor were its hurtful tendencies overlooked in the matter of predisposition to bad consequences after even very slight injuries. What has been said so far by no means applies to all the surgeons here, nor in any way does it represent the practice adopted in all the hospitals. On the contrary, no joints are left untouched in some. Hip joint disease in these latter means excision, and I am almost justified in saying that the same rule is followed and adopted as the proper treatment in chronic pulpy degeneration of any and all joints in which the operation is at all warrantable. These two courses of procedure are fully represented by the practice of the two largest, wealthiest, most renowned and best patronized hospitals in the city, under the charge of men whose reputations are world-renowned, whose excellence is unsurpassed. It is impossible to explain this belief in opposites, for nothing can be further apart than their plans of treatment, no deductions more widely opposed than are here drawn from the same data, derived from a similar class of cases, by men whose honesty of thought and action impresses the listener, whose knowledge and skill call forth his highest praise, whose charitable sympathy for the sufferer awakens his warmest admiration.

One is impressed with the thought that there must be a middle ground where the greatest safety lies. Perhaps one case witnessed (which is readily recalled) will illustrate the probable existence of this haven of refuge.

A little girl of about eight years of age, had been suffering with all the signs of hip disease for several months, and the stage of suppuration had been reached as evidenced by the sense of fluctuation. She fell into the hands of one who believes and practices excision. The operation was done, and after the separation of the excised head and trochanters, the specimen was immediately sawn through longitudinally by the pathologist who is always present at the operations. The divided bone told the cause of all the trouble at a glance. In the very center of the cancellated tissue of the head lay a sequestrum of dead bone, far removed from any possible chance of exit, and communicating with the "outer world," by the merest thread of a sinus. Nature could have labored for years at its removal and then have fallen short of the completion of the task, for all around this center of months of suffering and bodily decay, was a thick wall of normal, healthy bone. If ever surgical operation was justifiable, this one was—every stroke of the knife but opened the way to health and recovery. It is impossible to contemplate, what consequences would have followed in the wake of the waiting policy, without a shudder. The operation should be done, must be done, often—it is often done when early death or subsequent months and years of open sinuses and prolonged suppuration, convince one that rest, extension and good nourishment would have wrought better results. The choice must be made whatever be the subsequent history. The results following both methods, as here seen, are truly astonishing. I must admit that of the two, my preference now would be to assign by far the greater number of cases to non-operative treatment.

Through the great courtesy of Mr. Howard Marsh, Assistant Surgeon at St. Bartholomew's, it was my pleasure to visit the Hospital for Hip-joint Disease, under his charge, and superintended by charitable ladies. There were some fifty little patients showing all varieties of the disease in all possible stages, accompanied with every kind of deformity—in some both hip-joints were affected, and had added thereto Pott's disease of the spine. All cases which have been discharged from other hospitals as incurable, are admitted here, and one of their absolute rules is, that no cutting operation whatever shall be done—no operation at all other than aspiration of an abcess, if that may be so classed. Each patient has his or her own little cot—they are placed thereon as soon as admitted, flat upon the back; extension with weight and pulley is immediately applied and kept constantly in action. The direction of the extension always corresponds to the line of deformity present in the limb—no forcible attempt is ever made to straighten the limb. The straightening process is a very gradual and easy one indeed, and is secured by means of a movable slide on the frame, upon which the pulley is fastened. It is rather an amusing as well as instructive and impressive sight to see the little legs cocked up at all possible angles all over the room. Experience has taught them that with the adoption of this plan came greater ease to their patients and more rapid recoveries. No complaints are ever heard from the little ones after the first day or two expended in getting used to the newness of the position, unless accidental complications arise. Absolute rest *upon the back* is insisted upon and secured by constant watchfulness, and, better still, by a broad strap of webbing fastened to the bed, to which the shoulders of the patient are tied, so that, if the unruly bump is too well developed and the child attempts to get up as soon as the nurse's back is turned, he soon learns that all attempts result only in discomfiture. Do these children — many in a single room — grow pale and puny under all this restraint and confinement? Not at all, they grow fat and ruddy, their pain is relieved, their sufferings assuaged; kind hands tend to every want; they are, many of them, in better homes than they ever before dreamed of, and better than all, their bellies are filled with the fat of old England. I could not help saying to the doctor and attendants, that the most of the patients did not have any of the general characteristics of children suffering with hip-joint disease, they looked too well, their cheeks were too plump, their lips too red.

Some of the cases of recovery, in good condition after years of treatment commenced, when they were almost in the jaws of death, both hips diseased, almost surpass belief, and would give a thoughtful mien to the most devout believer in the triumphs of the knife.

After the flexion of the limb is overcome, abduction or adduction is counteracted by fixing the hips by a long splint to the sound side, and then a resort to lateral extension by weight and pulley upon the faulty limb and restoration to proper position gradually secured. After the case has gone to the end of this treatment and is practically well, usually with anchylosis, a splint termed Thomas' is fitted to the diseased side, crutches furnished and the little one turned out doors or into the play-room. At the same time the sole of the boot on the sound foot is raised two inches, so that the unsound limb can swing free from the ground and the joint be relieved from sudden jars too early after beginning to use it. Thomas' splint is an iron bar, about five Ctm. wide, and two Mm. thick, extending from well up on the back to the ankle, and bent in curves to fit accurately every curve of the body and limb. Of course it is well padded, and has fitted to it, cushioned side pieces of soft leather, by which it is held in contact with every part of the body and limb. All surgeons here use it, and think well of it. I am positively assured by every one connected with this little hospital, that many permanent recoveries have crowned their efforts at relief, and deaths are far less frequent than after operations.

Where the operative procedure is carried out, the after treatment is quite similar to our own, slight extension. Some do the operation under the carbolized spray. Mr. Lister always, of course. In every operation that I have seen done, the surgeon, after clearing the head of the bone by the usual incision and dissection, has always made his section with the saw, previous to making any attempts to get the head of the bone out of the acetabulum. All seem to think it the better plan of procedure. No one ever claims to obtain a result which gives a more than fairly serviceable limb. The resected head is never entirely restored, no matter what the after treatment, nor do the movements promisable after operation ever equal the normal ones.

The advisability of excision of the knee for chronic degeneration would force into ranks exactly the same opinions and men as we have found opposing each other in questions referring to the hip joint.. The principal opponents to this operation are among men who ten years ago performed the operation often, especially in young patients suffering from progressive joint disease. I mean progressively chronic ; it is to be presumed that no surgeon ever resects an acutely diseased knee joint. The mortality after the operation was so enormous, the good done was so slight in many cases, that they had been forced to believe the only proper course to pursue was narrowed down to one of two ; either treat by absolute rest and extension, or amputate. Some of these gentlemen unhesitatingly prefer amputation ; the recovery is rapid, suffering done away with, and the artificial appliances used subsequently, equal in efficacy the limb oftenest left after an excision, after which the agony is many times increased, and death frequently the result. The friends of the operation are equally as sanguine in favor of its benefits. Cases of this chronic nature are fearfully common in London, and it is merely a question of which hospital they enter whether the excision is done or not. A dozen or so have been done during my sojourn here.

In most of them the synovial membrane was much thickened and softened, ulceration of the cartilages was commencing, or had proceeded to advanced destruction. The fluid was either pus, semi-purulent or quite natural. The contour of the joint was destroyed. Palpation gave the usual quasi-fluctuating, semi-elastic feeling. Constitutional depression was gradually becoming more noticeable, and all local and general symptoms showed the disease to be rapidly gaining ground in spite of any and all treatment. It requires a brave heart to be patiently quiescent as such a history gradually unfolds itself to the point where sacrifice of the limb becomes a necessity, or death ends the battle; it takes a bold one to assume the responsibilities of excision. Excisions of the hip joint are often done here as soon as the surgeon by manipulation is fully convinced that the slightest roughness of the cartilaginous surfaces is present, not waiting for the suppurative process, or later stages of the disease. The aim is to anticipate and avoid the suffering and distress which it is claimed surely follows after the trouble has fairly commenced. Such unbounded faith in operative procedure is certainly praiseworthy, if it is only supported by correspondingly good results. We hope to see soon a full statement of the many cases operated upon by those who act upon this faith and belief in treating affections of the hip and knee joint. In this way only can the profession at large draw any conclusions from the practice of equally good men, some of whom operate perhaps two or three times a year while the others see occasion to use the knife almost every week.

C. T. PARKES.

ARTICLE XI.

BERLIN, N. W. 6 Kronprinzen-Ufer den 29 ten May, 1879.

In the February number of the CHICAGO MEDICAL JOURNAL AND EXAMINER Dr. Caldwell gives an account of one of my lectures which he attended, and of a private conversation which he says I had with him about Prof. Charcot of Paris.

I hereby declare that I never authorized Dr. Caldwell to publish the substance of my lecture nor that of a private conversation. I further declare that the substance of my lecture is in part incorrectly reported, and that I cannot have used in speaking of Prof. Charcot, the expressions attributed to me by Dr. Caldwell, because they do not express my opinion.

Receiving frequent passing visits from foreign physicians I do not recollect the person of Dr. Caldwell nor the conversation to which he alludes, and therefore cannot say how this misunderstanding has arisen. I presume, unless I am to suppose an intentional misrepresentation on the part of Dr. Caldwell in his publication so contrary to all European notions of what is fitting, that the misunderstanding grew out of Dr. Caldwell's insufficient knowledge of German or out of my imperfect way of expressing myself in English. I do not know in what language the supposed conversation was conducted, and can only say that the English expressions which I am said to have used to the prejudice of Prof. Charcot were hitherto unknown to me.

Finally, I expressly declare that I have always felt and still feel the greatest respect and admiration for Prof. Charcot's scientific achievements and for his character as a man, and further that I never conceived the thought, much less expressed it, of passing such a judgment on his recent experiments in metalloscopy as Dr. Caldwell puts into my mouth.

DR. WESTPHAL.

ARTICLE XII.

BERLIN, June 24th, 1879.

To the Editors of the Chicago Medical Journal and Examiner,
Chicago, Illinois:

GENTLEMEN:—I have seen in your journal for April, 1879, an article entitled, "Miscellaneous Surgical Notes from Berlin," by Dr. Caldwell. In justice to Dr. Martin, I wish to make a few comments upon what Dr. Caldwell says upon the subject, "Amputation of the Cervix Uteri."

The doctor says: "I am sorry to be compelled to believe that, like some others of our noted gynæcologists, he (Dr. Martin) is bent on doing '*his*' operation as often as possible, and so submits many a poor woman to this treatment, *who might be relieved by a more simple procedure.*"

I do not object to the first part of the sentence, for naturally one's own operation must be the favorite one with its author, and he will perform it wherever he thinks it justifiable; this is especially true in the case of a new operation, where there are no theoretical objections to it, in order to produce statistics from which its efficacy can be judged. But I do object to the last clause, not only because I have sufficient confidence in Dr. Martin's honor to believe him incapable of such practice, but also because I do not believe this conclusion to be the result of reasonable judgment.

The object of this operation is, in many instances, not to cut away a diseased portion of the organ, but by its stimulating influence upon the tissues of the whole uterus, to cause involution of the same; and the operation may be very useful even when the objective symptoms are slight.

I believe that it is absolutely impossible that a simple frequenter of a gynæcological clinic, even if he does occasionally assist the operator, can be competent to judge of the necessity of an operation for the cure of chronic metritis (hyperplasia, as the condition is called by Dr. Thomas, of New York). Only the gynæcologist who has had experience, and who has carefully examined his patient — not once, but at intervals for a long time — can have a reasonable judgment of his own in the case.

Surely Dr. Caldwell does not fully realize the serious nature of the charge — for it amounts to a charge — he has brought against Dr. Martin in this careless manner.

Upon first reading that Dr. Caldwell has "seen him (Dr. Martin) and assisted him at this operation more than thirty times," one is inclined to believe that this is an experience upon which, surely, a reliable judgment can be founded; but, of course, each operation was performed upon a different patient, and no one of them was probably seen more than the ordinary clinical patient is seen.

As to the opinion that the accidents following his operations are kept in the background, I will simply say that it is a common practice of Dr. Martin to exhibit to his class the results of his operations at intervals, as long as the patients continue to be under his care.

Dr. Martin is not so "bent on doing '*his*' operation," but that I have seen him perform Schröder's and Hegar's and others, the authors of which I do not know; and he has told his class in my hearing, that the particular operation must depend upon the condition of the particular cervix uteri to be operated upon.

As to the case of occlusion of the os, following amputation, we all know that an accident or bad result is liable to follow any man's work, and that it is by our failures we learn more than by our successes. Now Dr. Martin places a rubber tube in the cervical canal, thus effectually preventing a repetition of such an accident.

In giving some statistics relating to this operation as performed by Dr. Martin, Dr. Caldwell says: "Of these cases only two died as a *direct result* of the operation," and in almost the next sentence tells us that one of these two "proved fatal from the supervention of typhoid fever." It seems to me extremely unfair to call the death of a typhoid fever patient a "direct result" of a surgical operation.

I have been a member of Dr. Martin's class for two months, and am so well pleased with his skill as an operator, and have such belief in his honor as a gentleman, that I think it a matter of simple justice to him to ask you to publish this in your journal.

Very respectfully yours,

E. T. TAPPEY, A.M., M.D.

LEAD POISONING FROM THE USE OF BABY-CARRIAGES.—According to the *Journal de Méd. de Bruxelles*, the covers of baby-carriages are constructed of a species of American leather, which contains a large quantity of lead, and, when exposed to the direct rays of the sun, they become a source of danger to the little innocents whom they are supposed to protect!

Domestic Correspondence.

ARTICLE XIII.

A LETTER FROM DR. HENRY A. MARTIN.

Messrs. Editors:

The "New York Letter" in your journal for May contains the following, "The gum bandage is being used very extensively; in synovitis, arthritis, in sprains and bruises it seems to act remarkably well. Its magical effect on old ulcers is not so prominent. The ordinary treatment for these is to first wash them off with carbolized water, 1 to 20, then cover them with cotton that has been soaked in a saturated solution of boracic acid; over this the gum bandage is applied. Under this treatment the ulcers soon fill up with granulations, but cicatrization is by no means rapid, and it seems to be thought by the staff that those who have secured such wonderful results with this bandage have mistaken granulation for cicatrization."

As the first printed publication of the method of treatment, not only of ulcers of the leg, but of a very extensive and various series of other diseases and injuries, principally though not exclusively of the lower extremities, by the application of bandages of "pure rubber" was made by myself in the issue of your valuable journal for November, 1877, and as my exclusive claim to the invention of that method has, marvellous to relate, not been questioned, I am naturally interested in whatever appears in *your* pages on the subject, and I hope excusable for offering some comments suggested by the above quotation.

Whatever the merits of the method of treatment of ulcers at the Roosevelt Hospital, it is not *my* method. It is doubtless considered an *improvement* upon it. In every publication or other utterance that I have ever made on the subject I clearly recommend that a bandage of what is technically called "pure rubber" shall be applied *directly* to the skin and ulcerated or otherwise diseased surface, *without any other dressing whatsoever.* To the application and use of such a bandage, pure and simple, my own long and large experience, now confirmed by that of many thousand surgeons, not only in America but, and more numerously, in Europe, has led me to confidently ascribe an efficacy never before even distantly approached, in large classes of cases, in which are included vast numbers of instances of the most miserable and loathsome, though not lethal, of human physical infirmity; in which, indeed, all previous treatment had been extremely irksome and laborious to the practitioner, tedious and expensive to the patient, while its results were often so long postponed as to leave considerable doubt in the minds of both parties whether they were results of treatment and not of more or less impeded reparative effects of nature only; and, too often, these results were far from complete and enduring. I have not neglected the use of anything under the bandage from a lack of knowledge, or, at any rate, of experience of the value or merit of the means with which, not only the "surgical staff of the Roosevelt Hospital," but several other practitioners also, have seen fit to complicate and "improve" my method.

In the paper in which (*British Medical Journal*, Oct. 26th, 1878) I asked the attention of the profession of Great Britian to the use of the pure rubber bandage, I wrote:

"It" (the bandage) "is to be applied directly to the skin and surface of the ulceration without any lotion, salve, or other dressing whatsoever. The statement attributed to Mr. Hutchinson, that a piece of lint may be placed over the ulcer, has no authority from me. An essential point in the method is that *nothing whatever* shall be applied between the bandage and the ulcer. In a very few cases, a hyperæsthetic patient has been, or thought he (or she) was unable at first or at all to endure the rubber next the skin, and, in these cases (not one in a hundred), I have directed that a linen, cotton, or thin flannel "roller" should be applied to prevent the immediate contact of the rubber. I have done this rather than renounce the great advantages of the india-rubber bandage entirely; *but it always delays the cure of the ulcer.* In cases of uncomplicated varicose disease, or in many joint cases in which the important use of my bandage is the support and security it affords, there is no objection to the application of an ordinary bandage under the rubber; but in cases of ulcer, eczema, and other cutaneous diseases, and many where the joints are affected, it is necessary, for the full attainment of the benefits of the treatment, that the bandage should be in immediate and close contact with the *skin.*"

In the other two principal papers which I have published on the subject, I have, in other words, expressed precisely the same opinions. These plainly expressed notions of mine do not, of course, prove that the Roosevelt Hospital method is not much better, but they sufficiently prove—and that is my present object—that my method differs very essentially from that of the New York surgeons, and if the reader will take the trouble to refer to the papers to which I have alluded, he will find that before I reached the perfect simplicity of treatment which I practice and commend, I had thoroughly and patiently tested and abandoned entirely the Roosevelt method, and many more or less like it. I in no way criticise the New York "*improvement,*" or deny that it is one, except so far as to say that in my opinion the application of *anything* between a properly made bandage and the skin will fail to promote, in the slightest degree, the ends attained by the proper application of the bandages *alone*, while carbolic or boracic acid, whether an ingredient of the bandage (as the former is of many advertised and sold in large numbers as "Martin's bandages"), or in ointment or lotion, alone or saturating a compress applied to a wound or ulcer, unless in an extremely dilute state, will very much delay the process of cicatrization. Lister's antiseptic method avoids, with the most elaborate and complicated care, the contact of carbolic or boracic acid with granulating surfaces. That great theorist is also enough of a surgeon to know that the *immediate* contact of such substances very seriously interferes with the process of cicatrization. In many hospitals, however, in America, the antiseptic method, an "improvement" on Lister's, consists in the most liberal inundation of wounds, ulcers, compound fractures—

everything—with the inevitable carbolized solution or oil. So much is this method esteemed, that it seems to take the place of and to be supposed to obviate the necessity for many antiquated notions of pre-carbolic surgery, as counter-openings, drainage, etc., etc. Your New York correspondent's quotation of the sage surmise that gentlemen who had reported ulcers rapidly and solidly healed by "Martin's bandage" did not know what they were talking about, and mistook granulation for cicatrization, is very far from complimentary to a very large and very illustrious body of practitioners in Europe and America. Do the surgical staff of the Roosevelt Hospital really think that there is a practitioner anywhere so ignorant as not to know an ulcer healed from an open ulcer. If that distinguished staff, in its same self-complacency and associated contempt for almost everybody else, is so credulous, does its credulity extend to the belief that Prof. Gunn, of Chicago, their own townsman Dr. L. D. Bulkley, Mr. G. W. Callender (Surgeon of St. Bartholomew's), and Jonathan Hutchinson, one of the very greatest surgeons living, and many equally eminent, who have all reported large numbers of cases of ulcer healed by the use of "Martin's bandage" *alone*, without any of the Roosevelt improvements, are also ignorant of the difference between cicatrization and granulation; that, in a word, that subtle and sublime item of surgical wisdom is well-nigh exclusively the prerogative of the "surgical staff of Roosevelt Hospital?"

I wish to say something more in regard to "gum" bandages. The use of the simple word "gum" for india-rubber and for all its compounds was, I think, principally confined to New York, and little known to the world outside of that favored city, till certain scandalous passages in its social history brought into the secular press of the country a racy correspondence touching a certain pair of "gum shoes." The material of which gum shoes are made contains a very small percentage of gum caoutchouc. Very few of the almost innumerable articles known as "rubber" contain more than a small proportion of india rubber, their ingredients, besides this, being very numerous and various. Carbonate of lead, oxide of zinc, oxide of mercury, sulphuret of antimony, sulphide of carbon, whiting, carbolic acid, litharge, wood naphtha, and an almost interminable list more. Bandages made of "gum" or "rubber," containing such substances as carbolic acid, sulphide of carbon, or carbonate of lead are totally unfit to be applied for any length of time to a sound cutaneous surface, and much less to an ulcerated or otherwise diseased or wounded one. If the bandages used at Roosevelt Hospital are like many I have seen, the method of preventing their contact with the skin is very wise and proper.

Immediately after the publication of my method, in Europe and in this country, there arose a very great demand for "Martin's bandages." To meet that demand, in obedience to a well known law, manufacturers produced immense quantities of bandages totally unfit for use, worthless or nearly worthless from their want of durability, and worse than worthless, absolutely injurious as applications, as I have directed, immediately and for long periods to the surface of the body. Of all these bandages, of which I have seen specimens, there was but one which I could conscientiously approve, and even this would prove unsatisfactory on the score of durability, for the rubber of which it was made, though of excellent quality was "green," *i. e.*, quite unseasoned. Not one of the rubber manufacturers ever came or wrote to me for directions or suggestion or even apparently (save in one instance) thought it worth while to obtain one of my bandages as a pattern, and so, without any knowledge or appreciation of the importance of making them of certain material and in a certain way, they produced and sold thousands of bandages, reports of the want of durability of which, and of the imperfect and unsatisfactory results from the use of which are made by men who I know in some instances, and surmise in very many more, never think their disappointment can have anything to do with the quality of the bandages employed, but that it is due to my having overstated the value and efficacy of the new method. Reports have been published in English medical journals of precisely the same failure of the process of cicatrization noticed at the Roosevelt Hospital, which has been due to the use of bandages reeking with carbolic acid. I wrote to the reporter, informing him of the cause of his partial failure; he procured bandages from my London agents, and results obtained from their use, with the very patients on whom the carbolized bandage had failed, speedily convinced him that my explanation was correct. I sent the same information, for the benefit of the European profession, to two of the most top-lofty of English medical journals. It was not published, and for this simple and sole reason, viz., that the manufacturers of the bandages which had been, at one stage of the manufacture, soaked in a strong solution of carbolic acid, to disguise the fetor of inferior "gum," and with a forlorn hope to prevent its rapid deterioration or "rotting," advertised very largely in the said high minded journals, and are the source of pleasant rills of income flowing into their coffers. It was, of course, in their estimation, far better that practitioners should be cheated, patients wronged and injured, and (but that is hardly worth mentioning) my method misrepresented and misjudged, than that the pleasant and mutually profitable relations between most "respectable" and wealthy though rascally dealers and these dignified journals should be in any way or degree disturbed, and, above all, in the interest of an unknown and insignificant trans-Atlantic doctor.

Without entering at all into a detailed account of the very numerous and interesting processes in the manufacture of pure rubber bandages, I will state that "Martin's bandages" *should* be, and those inspected by myself and sold by my agents *are*, made of the very finest selected extra price Para rubber, thoroughly cleaned, and losing from twenty to twenty-five per cent. thereby, rolled into coarse sheets, called "mats," and seasoned for from at least 6 to 12 months. In addition to this, literally nothing except the extreme minimum of pure sublimated sulphur, absolutely necessary with heat to effect the "curing," enters into the composition of the bandage. At a certain stage of manufacture, just before curing, the immense sheets of which my bandages are made are covered with an impalpably fine powder of French chalk. This, with a slight efflorescence of sulphur, produces the light grayish appearance of my bandages, but this is quite extraneous, and is entirely removed by a few days' wear. This purity of the material of the bandages is of the very highest importance, as is also another quality, viz., the most perfect possible smoothness. In previous writings I have not dwelt on this. I had never used any bandages except smooth ones; it never occurred to me that any one would make bandages to be applied directly to inflamed, irritable and ulcerated surfaces other than smooth. Since those publications, great numbers of bandages have been made (once, by a rascally manufacturer, for myself) deficient in smoothness, and the effects from the use of these have instructed me as to the necessity of cautioning the profession against any rubber bandage, if to be worn next to the skin, that is not, besides being pure, as above indicated, of the most perfect attainable smoothness. Very much against my original intention and wish, as the only way to save the innovation in treatment in which I am so deeply interested from misjudgment and more or less oblivion and neglect, I have become interested in the manufacture of rubber bandages. The manufacturer, a warm personal friend, and enthusiastic believer in my method, has been so kind as to give the matter an amount of his personal attention and supervision which, as a matter of business, can never be repaid; at every stage of the manufacture he gives me every facility for inspection, and every bandage made by him for me is stamped with a *fac simile* of my signature in carmine ink, and fully warranted to possess the most perfect durability and to be made of the very best material, in the very best possible way. These bandages, made in twelve different sizes, and of four different degrees of thickness, can be obtained from myself, or from either of my agents, in London and Boston, who are instructed to at once exchange any bandage thought to be defective in any way for a perfect one, or return the price, as the purchaser may elect.

I would gladly have avoided the trouble the supervision and care of this business gives me. I will at once drop it, so soon as the market is fully supplied, from other sources, with "Martin's bandages," such as alone I recommend, or have ever recommended. At present, I regard the continuance of the enterprise as absolutely necessary to my own reputation and that of the method I have fully and frankly offered to the profession and the public.

I offer no apology for the length of this letter. The physicians of the West largely employ "Martin's bandages." They were led to adopt the practice from hearing my remarks, at Chicago, in June, 1877, and from reading my paper, in your journal, in November, 1877, and it is nothing less than a duty for me to write, for their instruction, much contained in this communication.

If gentlemen rigidly and exactly following the directions I have given, fail to obtain results of treatment such as I have indicated and promised, let them first thoroughly and accurately ascertain whether the bandages they have used are such as alone I recommend. If they find that the bandages are all right, then let them "pitch into" me and my method; but if they use bandages such as are sold by the thousand, and adopt "dodges" and improvements on my method, they must see the injustice of reporting their results as results of Martin's method of using "Martin's bandage."

HENRY A. MARTIN,
27 Dudley St., Boston.

June 23, 1879.

ARTICLE XIV.

MESSRS. EDITORS:

Our State medical Society recently held an annual meeting, which was successful in all respects, and was made especially interesting by discussions on papers which were read before the general meeting. Papers on chosen subjects are read, by physicians who are appointed to this duty by a committee on medical essays. But in the previous years, at the annual meeting of 1878, for instance, the papers were listened to without a word of comment. This lack of responsiveness was criticised in the published report of the meeting. This year, however, President Lyman called upon various gentlemen for remarks, which gave rise to a spontaneous discussion. This feature is one which not only makes these meetings more valuable, but gratifies and partly compensates the readers, who, having expended much thought and research in the preparation of their papers, deserve recognition of this better sort.

Days before the meeting, the Fellows of the society are made acquainted with the subjects of papers to be read, and consequently there is no reason why they should not prepare themselves to speak. This increases the interest of papers which otherwise seem to fall flat, to the great disgust and discomfort of the gentlemen who have carefully and conscientiously written them.

The annual meeting of the Massachusetts Medical Society is held in some convenient hall, the executive officers having their quarters in the same building. That chosen for this year afforded abundant space, so that various surgical instrument makers and medical book publishers of this city and New York were able to make a fine exhibit of their wares; a most excellent thing for practitioners from the country, who of course but seldom have opportunity to examine the recent ingenuities in surgical and medical appliances.

At one o'clock on the second day of the meeting, the annual dinner is spread in our spacious music hall. The Fellows march in to the music of an orchestra, which is stationed in one of the galleries, and, with the exception of officers and invited guests, who are seated at special tables, they take their seats wherever they choose, at either of the long tables on the floor of the hall. An hour being given to the enjoyment of the dinner, which, this year, was particularly good, because nothing but cold dishes were provided, the anniversary chairman calls the meeting to order, and opens his budget of toasts, which are more or less *à propos*, according as his familiarity with the characteristics of respondents is extensive, and his own wit nimble and flexible.

The invited guests usually comprise the governor, the president of Harvard University, collector of the port, surgeon-general, a distinguised clergyman, who likewise officiates as annual chaplain, and representatives of the army and navy. The first gentleman called upon to respond, by courtesy, is the president of the society, then the president elect for the following year, next the governor, or in his absence his lieutenant. Toasts and responses are commonly interesting and provocative of mirth, for the speeches made at a doctor's dinner are apt to be amusing. The laymen present of course make use of what that body apparently considers its especial privilege, and so the antiquated changes upon the benefit to patients of the absence of their physicians, *et id genus omne*, are freely rung. At our dinner of this year about 650 gentlemen were present, of whom only five were laymen.

The affair lasts from one to four o'clock, fine music enlivens the occasion, and the companionable cigar of nearly every guest contributes to the cloud which slowly forms under the ceiling. After the dinner, and previous to the speeches, the Fellows form in groups and couples and distribute themselves about the galleries of the great hall. In every way the occasion is one of most agreeable enjoyment, especially to those faithful, hard working physicians from the country, who from year's end to year's end probably have no other relaxation from their wearying round of duties. It is hardly necessary to say that they, in common with the city Fellows, are proud of this grand old society, whose influence is so widely felt, and whose character deservedly stands so high.

The red letter feature of the annual meeting of the society is the annual gathering of its councilors, which body includes the officers and the various committees, and in whose care is placed the settlement of all the ethical, legal, financial and literary matters. For many years the councilors have met in contracted, inconvenient, stuffy rooms on temple place. This year they met, and will hereafter meet, in the beautiful hall of the Medical Library building, of which I gave you a description in a former letter. Henceforth, too, the archives and records of the society, heretofore kindly preserved by the Massachusetts Historical Society, will be deposited in this building, a safe having been provided for the purpose.

At this meeting discussions are as frank as they often are exciting. Last year the bone of contention was a new code of ethics, which even now has not reached a satisfactory completion. The woman question also came up, having been launched into the stream of discussion by a resolution from one of the district societies, which crystallized the topic by requesting the admission to the society of female practitioners "in good and regular standing." A committee appointed by the district society had canvassed the State, by addressing to Fellows of the parent society the question as to whether they advocated, or objected to the admission of women. The result, as embodied in their resolution, seemed to indicate a favorable response from the majority; but, since over 40 per cent. did not respond, the

the councilors were not particularly credulous of the sanguine view taken by the committee in question. After some rather warm debate the matter was referred to a special committee, and has since been re-referred (this was at the winter meeting of the councilors), and finally at the recent gathering it was again postponed, because of the absence of Dr. H. W. Williams (one of the committee), who wished to express his views, but was detained by a most distressing accident to one of his children, which occurred only an hour before the time of meeting. The motion to postpone to the October meeting called forth some warm expressions, which implied that feeling and opinion, pro and con, were of a decided nature. This meeting gives large opportunity to the oratorically disposed, and since some of the councilors are politicians and members of the general court, their familiarity with parliamentary law is often made most amusingly evident. Now and then discussions become so earnest that the president's gavel is kept busy. Nevertheless, however warm the feeling of disputants may be, it is honest, generally serious, and its object is a sincere desire to promote the best welfare of the society.

We anticipate a certain degree of fervor in the discussion of the woman question at the October meeting. I shall take care to inform you of the result. It is a question which, at the present time, is interesting the laity as well as the medical faculty throughout the State.

You may have read that application for the admission of women to the Harvard medical school was made by interested parties, some fourteen months ago, and was the more calculated to awaken public interest from the fact that Miss Marion Hovey, as one of the trustees of a fund bequeathed by her father for benevolent purposes, proposed to present the sum of $10,000 to the school, on condition that "its advantages be offered to women on equal terms with men." The question of accepting the offer was referred to the overseers for their consideration and advice. They placed the communication in the hands of President Eliot and a committee, the chairman of which, Mr. Alexander Agassiz, issued a circular containing the following questions.

1. Are you in favor of admitting women to the medical school?

2. Are you in favor of admitting women on equal terms with men?

3. Are you in favor of a separate school for women?

4. If in favor of medical co-education, specify the subjects which, in your opinion, can be taught in common, and those in which men and women should receive separate instruction.

This circular was addressed to members of the Massachusetts Medical Society, a postal card being included, which bore numbered blanks for replies. What the exact result in negative and affirmative reply was, I do not know, but recently an adjourned meeting of the overseers of the university was holden, at which the matter was thoroughly discussed. Two reports, a majority and minority report, were presented. The former examined the question in all its bearings; and closed with a recommendation that the trust offered by Miss Hovey be accepted, under conditions which, briefly, were these:

"That, after the completion of a new building, women be admitted to the school, as an experiment, for a period of ten years.

"That they be not less than 22 years of age.

"That requisitions for admission, and the curriculum, be the same as for men.

"That the examination of men and women be identical.

"That nothing shall be countenanced which will lower the standard of the school, or affect the execution of the plans formed for its development.

"That the courses of lectures in which students take no active part be open to both sexes; that for personal instruction in laboratories and for recitation, men and women be separated; and that complete separation be made in such subjects as obstetrics, diseases of women and children, certain portions of anatomy, physiology and the like."

The sense of the minority report was, that while the admission of women to the profession of medicine is legitimate, perhaps called for, they will do far better in schools of their own, especially so since a plan requiring separation of the sexes in certain branches would be less advantageous to women than a school devoted exclusively to their sex.

It was finally voted "that the overseers find themselves unable to advise the President and Fellows to accept the generous proposal of Miss Hovey."

It was further voted, "that in the opinion of the overseers, it is expedient that, under suitable restrictions, women be instructed in medicine in Harvard University, in its medical school."

The latter was a qualifying vote which left some doubt as to the real feeling of the overseers. Nevertheless, the result was practically decisive against the admission of women to the school.

This is a cause of satisfaction to the faculty of the school, as well as to the majority of physicians here. Notwithstanding the sanguine tone of the petition, there is no popular demand for the coeducation of young men and women in medicine. Petitions of this nature are rarely trustworthy, for a mere signature does not always indicate the real sentiments of the signer, who may have given his name from sheer inability to refuse, and probably without due and careful forethought.

I merely present the case as it stands and without further comment, preferring to await the doings and opinions of the councilors' meeting of the State society. It will probably do much to settle the whole matter, so far as Massachusetts is concerned.

Before I close, I cannot deny myself the pleasure of giving you the remarkable obituary notice of the death of Drs. Jacob Bigelow and J. B. S. Jackson, which was read at the late meeting of councilors, by Dr. Calvin Ellis, the chairman of a committee appointed for the purpose:

"When at this, our annual meeting, we call the roll and receive no response from

JACOB BIGELOW, or
JOHN BARNARD SWETT JACKSON,

"whose lives were full of noble labor, we are reminded that the mere mention of their names is a fuller expression of a sense of loss than any formal phrase of ours."

The unusual force and beauty of this testimonial created a deep mpression.

* *

BOSTON, July 12, 1879.

Article XV.

Health Department in Hyde Park.

Many physicians whose practice extends within the limits of this suburb, are unaware of the existence of the health department. For the benefit of such practitioners, I beg leave to respectfully call attention to this matter through the columns of the Journal and Examiner. The Health Department was established in September, 1878. The executive officer is the Village Physician who is appointed by the Board of Trustees. The duties of the Village Physician, in so far as physicians and midwives are concerned, are defined in the following selections from Chapter XXI of the Ordinances of the Village of Hyde Park:

"Section 1. Every practicing physician in the village, who shall have a patient laboring under yellow fever, small-pox or other infectious or pestilential disease, shall forthwith make a report thereof in writing, to the Village Physician describing the locality of the house or place where the said patient may be.

"Sec. 2. No person shall put out, remove or allow to be put out or removed, from the premises or place occupied or owned by him, into any street, alley or other public place in said village, any person having the small-pox or any other pestilential disease; but each owner or occupant shall immediately report such case to the Village Physician or the President of the Board of Trustees.

"Sec. 10. Every physician, midwife or other person who may professionally assist or advise at any birth or death, shall make a return of such birth or death to the Health Department of this village, such as is now required by the State Board of Health to the County Clerk. Said returns of births shall be made to said Health Department within ten days after the date of such birth, and returns of deaths shall be made to said Health Department within twenty-four hours after such death may occur. It shall be the duty of said Village Physician to transmit the returns of births and deaths aforesaid to the County Clerk within the time now prescribed by law.

"Sec. 12. No remains of any human being, having died within the corporate limits of the village, or whose body may have been found within the limits of the same, shall be removed from this village for interment, or otherwise, nor shall said remains be interred within the corporate limits of the Village of Hyde Park until the certificate, as required in Section 10 of this Chapter, shall have been filed at the office of the Health Department and a permit first had and obtained for each removal and interment."

It may be well to state that the Village of Hyde Park extends from 39th street to the Calumet river, and from State street to the lake, and includes the localities known as Oakland, Kenwood, Woodlawn, Egandale, Forrestville, Anthony, Park Side, Grand Crossing, South Chicago, Irondale, Holland Settlement, Wildwood and portions of Englewood, Riverdale, Colehour and Kensington.

Burial permits can be obtained upon the presentation of a death certificate from a physician, or the findings of a coroner's jury at Kenwood av, east 47th street, before 9 a. m. and after 7 p. m.; at the Village Hall at 10 a. m., or at 5001 State street (corner of 50th street) between 11 a. m. and 1 p. m., and 4 and 6 p. m., (Sunday, between 3 and 6 p. m).

Physicians are requested to report all cases of yellow, ship or typhus, typhoid, scarlet and spotted fevers, cholera, small-pox, chicken-pox, measles, whooping-cough and diphtheria. Blanks for this purpose will be furnished on application.

Cases of infectious diseases will be quarantined when necessary, and proper measures taken to prevent such diseases becoming epidemic.

The hearty co-operation of physicians in the requirements of the Health Department is earnestly solicited.

William H. D. Lewis,
Village Physician.

Dr. Wm. H. Byford having been invited to read a paper before the Obstetrical and Gynæcological Section of the British Medical Association, has sailed for Europe with that object in view.

Editorial.

ARTICLE XVI.

ILLINOIS STATE MEDICAL SOCIETY.

In compliance with the request of one of the editors of this journal, the Secretary of the State Medical Society furnished the full official record of the proceedings of the recent annual meeting for the July number. The manuscript was contributed rather late in the month, and by some mistake or oversight, it was put to press without allowing the Secretary to see a copy of the proof sheets. The consequence is a lamentable number of typographical errors, mostly in the names of persons and places. In the first of the resolutions offered by Dr. Nesbitt, printed on page 86, instead of "County *Surgeon*" it should be County *Surveyor*. The number of papers read before the State Society during its recent meeting was large, and they were well written; and with the record of proceedings will make a volume of transactions containing between two and three hundred pages. Besides the reading and discussion of reports and papers of value relating to the science and art of medicine, the attention of the society was given to several other topics of general interest. Both in the address of the president and the report of a special committee, the sentiments of the society were strongly and unanimously expressed in favor of amending the present State law in relation to the mode of determining questions of insanity with reference to restraining the insane, or committing them to the care of asylums. It will be seen by reference to the proceedings that the report of the committee on this subject was brief and judicious. That report, accompanied by the endorsement of the society, was immediately presented to the legislature, by Dr.

Nesbitt, listened to with attention, and referred to the committee having the bill for amending the law in charge. The legislature, however, subsequently adjourned without passing the bill, thereby still leaving upon the statutes of our State the arbitrary, and in some respects cruel, provision that every person charged with insanity or mental unsoundness, must be brought into open court, confronted with witnesses and tried by a jury. Another subject worthy of attention, was embodied in the preamble and resolutions offered by Dr. G. W. Nesbitt, of Sycamore, asking for the framing and enactment of a law establishing in each county in the State, a "board of commissioners of hygiene," to consist of the County Superintendent of Schools, County Surveyor and one physician, whose duty it should be to exercise a superintendence over the construction and sanitary condition of all public school buildings and locations. A committee consisting of Drs. G. W. Nesbitt, H. M. Lyman and J. H. Rauch, was appointed to draft a law and report at the next annual meeting of the society. The object sought to be obtained is one of great importance, and should receive the earnest practical attention of every intelligent physician, whether he is appointed on a commission of hygiene or not. And yet we think every proposition to increase the number of municipal, county or State officers or commissioners, should be viewed with some distrust.

There is too great a tendency to relieve the people of responsibility by committing their duties to commissioners or some kind of public officers, and yet all experience shows that, in nine cases out of ten, such official positions are filled with mere political partisans, who are more anxious for the success of the political party than for the health and welfare of any part of the community. In matters of hygiene, especially in regard to the management of children and schools, every physician should consider himself responsible for the proper education and instruction of every family to which he has access, and for an active interest in the sanitary condition of every school building in his neighborhood. In other words, every educated physician should be an active conservator of the health of the community in which he lives, and not a mere *prescriber* for the sick.

ARTICLE XVII.

COLLEGE LECTURE FEES.

We see by the annual announcements of the several colleges, that all the regular medical colleges in Chicago and Cincinnati have placed the annual lecture fees at $75, instead of ranging from $40 to $55, as heretofore. This is a judicious move in the right direction, and is all the more commendable from being done, simultaneously, by all the more important schools in the West, whose trustees and faculties, had in former years allowed the influence of the substantially free medical schools attached to the State Universities of Michigan and Iowa, to depress their lecture fees to an unduly low figure.

PPOSPHATURIA IN ITS RELATION TO SURGICAL OPERATIONS. (*Progrès Médical.* M. Verneuil.) M. Verneuil called the attention of the Academy of Medicine to a recent thesis by Mr. Tessier, of Lyons, in which he reported certain cases of phosphaturia associated with certain ocular affections, which on that account became exceedingly troublesome. M. V., having his attention drawn to the subject by this thesis of Mr. Tessier, soon observed analagous cases. A small fibroid tumor was removed from the thigh. The operation was in itself insignificant, yet troublesome hæmorrhage followed, considerable suppuration, the cure requiring a period of six months. During this period it was ascertained that the urine contained large quantities of earthy phosphates. He also observed that in an individual, the subject of phosphaturia, or excessive discharge of phosphates, fractures would seem to be more readily effected, and the union more tardy. It appears from M. V.'s paper that phosphaturia retards reparation of wounds, and render the bones more fragile. Looking at the question more generally, M. V. concludes that the phosphaturia was not at all the *result* of the wounds or fractures, but more or less the *cause* of the fractures and the tardy union of wounds.

Reviews and Book Notices.

ARTICLE XVIII. — A MANUEL OF EXAMINATION OF THE EYES. By Dr. E. Landolt, Directeur-adjoint of the Ophthalmological Laboratory at the Corbonne, Paris. Translated by Swan M. Burnett, M.D., Lecturer on Ophthalmology and Otology in the Medical Department of the University of Georgetown, etc. Revised and Enlarged by the Author. Philadelphia: D. G. Brinton, 115 South Seventh St., 1879; pp. 307.

This book is a most admirable and complete *exposé* of our means and methods of making a thorough scientific examination of the human eye. The scope of the work is delineated on page 20, in the following words: "We shall divide our examinations into the *objective* and *subjective*, the first having for its object to make us acquainted with the eye in a state of functional inactivity, the second to determine the condition of the function of vision.

"The *objective* examination should begin with a general inspection of the patient at a distance, in which we note all that we are able to observe as to his general appearance, and, in particular, the appearance of his eyes, as, for example, their position, etc.

"Afterwards, we examine all parts of the visual apparatus which are accessible to the naked eye, the lids, lachrymal passages, conjunctiva, the form and size of the globe, the cornea, sclerotic, iris, crystalline lens and anterior portion of the vitreous humor. The examination is completed by the determination of the ocular tension.

"In the *subjective* examination, the various functions of the eyes are passed in review, such as movements, refraction and accommodation, acuteness of vision, perception of color, limits of the field of vision, the periphery of the retina.

"Finally, the examination with the ophthalmoscope and the oblique light will show us the condition of the interior of the eye and the dioptric media, and also give us definite ideas regarding the refraction."

It will be observed that the author reserves the ophthalmoscopic inspection, though it forms a part of the *objective* examination, for the end of the examinations. His reasons for so doing are that the ophthalmoscope "always dazzles the eye to a greater or less degree, and renders the functional examination afterward somewhat less satisfactory. Moreover, the ophthalmoscopic examination requires a dark room, and it is better to make at first, all those examinations that are possible by daylight. Moreover, the facts gained by subjective examination are very useful in interpreting the ophthalmoscopic appearances."

This is, perhaps, a matter of opinion rather than of fact; for in our experience we cannot recall a case in which a preceding use of the ophthalmoscope has interfered with the subsequent examination of the functions. But on the other hand, we find it very advantageous to ascertain by the ophthalmoscope the condition of the interior of the eye in all cases of disturbed vision, before we enter into a minute examination of the functions. If the ophthalmoscope reveals a diseased retina as the cause of the visual defect, the functional examination at once is shortened, because it would neither be necessary nor judicious to submit such an eye to a prolonged test of its refraction or accommodation.

In the chapter on "Refraction and Accommodation," the metric system is adopted, according to the proposition of the International Ophthalmological Surgeons held in Brussels in 1875. The unit of the new system is a lens of *one meter focal distance*; it is called a *Dioptry*; and we are informed that the most essential advantages of the new system over the old one are:

1. Numbering the lenses according to their focal power.
2. The unit sufficiently feeble, so that the numbers of the glasses generally in use should be expressed in *whole numbers* and not in fractions.
3. Having the intervals increase gradually from the feebler to the stronger numbers.

This is not the place for discussing the pros and cons of this new departure in optics; but we must say that the reader of Landolt's book may have some difficulty in appreciating the wisdom of this new system with a unit sufficiently feeble to enable us to express the numbers of the lenses in *whole numbers*, if, half a page further on, he is informed that: "It has been found in practice, however, that we have need of lenses weaker than one dioptry. And for this reason there have been admitted into the scale fractions of a dioptry. We have lenses of ¾ D. (0.75 D.), ½ D. (0.50 D.) and ¼ D. (0.25 D.). Quarters of a dioptry have likewise been introduced between the weaker numbers of the series up to No. 2.5, and half dioptries from No. 2.5 up to No. 6."

But this is no fault of Landolt's, and cannot detract an iota from the merits of his book. Written in the attractive, easy style of lectures, unincumbered by unnecessary mathematical formulas, printed on heavy paper and in large and clear type, translated with care and skill into fluent English, this book will contribute largely toward awakening greater interest for ophthalmology among the reading members of our profession.

F. C. H.

ARTICLE XIX.—A GUIDE TO THERAPEUTICS AND MATERIA MEDICA. By Robert Farquharson, M.D., Edin. Second American edition, revised by the author. Enlarged and adapted to the U. S. Pharmacopœia by Frank Woodbury, M.D. Cloth, pp. 498. 1879. Philadelphia: H. C. Lea.

The special feature about this book is the arrangement in parallel columns of the physiological and therapeutical action of the various drugs considered. The author has felt it necessary to make a quasi-apology for the use of the words "Materia Medica," and we think with reason. We fail to find anything in the book that justifies the interpolation. The value of a new book on Therapeutics must be looked for in the accuracy, conciseness and completeness of the information afforded.

Speaking of ammonia, our authors tell us (p. 130): "It has, therefore, been used with success by Richardson in those cases where, as after delivery, *diphtheria*, *ovariotomy*, etc., a clot is forming in the heart, and he recommends it by injection into the veins, stopping short of the solution of the red corpuscles." We might have been favored with information how to know when a clot is "forming in the heart," how we are to know when to stop "short of the solution of the red corpuscles," and of what strength to make the injection.

Speaking of aconitia, p. 105, we find, "not given internally." On page 109 we read: "Prof. Gubler, of Paris, values it very highly in neuralgia of the fifth nerve, which he has never known to resist a quarter of a milligram of the nitrate of aconitia."

Although the foundation of this book was laid across the water, the English is by no means without blemish. R. T.

ARTICLE XX.—PHOTOGRAPHIC ILLUSTRATIONS OF SKIN DISEASES. By George Henry Fox, A.M., M.D., Clinical Professor of Dermatology, Starling Medical College, Columbus, O., Surgeon to the New York Dispensary, etc.. Forty-eight colored plates taken from life. *Part No.* 1: Comedo, Acne (Vulgaris), Lepra (Tuberosa), Elephantiasis. *Part No.* 2: Keloid, Rosacea, Psoriasis (Nummulata), Ichthyosis (Simplex). *Part No.* 3: Fibroma (Pendulum), Varicella, Zoster (Pectoralis), Zoster (Lumbalis), Eczema (Universale). *Part No.* 4: Leucodermia, Chromophytosis, Favus (Capitis), Favus (Corporis), Eczema (Cruris). New York: E. B. Treat, No. 805 Broadway. Sold by subscription. W. T. Keener, Chicago agent.

Sharply and clearly taken photographs are probably the most perfect representations of nature which it is possible to obtain. They fail, however, in respect to coloring, which is so essential to a faithful portraiture of any object possessing color. Artistically colored photographs give an idea of the objects represented which it is difficult to excel in the matter of accuracy.

These illustrations of skin diseases are admirably perfect representations of the diseases named above, since they meet very faithfully the requirements as to color and exact reproduction of the original. Dr. Fox has been for several years identified with the effort to represent the dermatological field with accurate photographs, and indeed had excellent results even before he attempted to reproduce the pathological tints. In the present work he has received, in the labor of coloring his impressions, the excellent aid of Dr. Gaertner, who was lately a student under the famous Hebra, in the General Hospital of Vienna.

By a method which has never before been applied to photographs of diseases of the skin, the publishers have succeeded in printing directly from the glass photographic negatives, and can thus assure their subscribers that the impressions are indelible.

The letter press which accompanies and explains each photograph, is a concise and clear exposition of the diagnosis and treatment of each disease considered, a feature which will especially commend these illustrations to the general practitioner.

It should be added that the forty-eight illustrations which it is intended to produce will be selected from the author's extensive and valuable collection. There will, therefore, be no delay in the production of the work.

We recommend these photographs to the student and practitioner with the assurance that they are admirably exact in representation, and well calculated to assist in acquiring a knowledge of dermatology. We cannot conclude better than by quoting the words with which Dr. Fox introduces his work: "The study of skin diseases without cases or colored plates, is like the study of osteology without bones, or the study of geography without maps." J. N. H.

ARTICLE XXI. — READING BOOK OF ENGLISH CLASSICS FOR YOUNG PUPILS. Selections from the standard literature of England and America. By C. W. Leffingwell, D.D. New York: S. G. Putnams' Sons, 1879; 12mo., pages, 403.

Any step in the direction of improving the hygiene of the school-room, is worthy of notice in a medical journal. In this reader the compiler has applied correct principles, as regards size of type and tint of paper. If every school book in each department of study were printed with due respect to these principles — if in the preface, or somewhere in the text of these books, were a few rules on the use and abuse of the eyes — much injury of sight, in spite of ignorance and carelessness, would be avoided.

Commissioners who have in charge the construction of school buildings, can do much to preserve good vision in the young, by securing sufficient evenly distributed light, and also by constructing seats and desks in the most approved form.

We trust in future editions of this reader and in other similar works, which the author has in preparation, more will be said on these important subjects. E. L. H.

ARTICLE XXII.—A GUIDE TO THE QUALITATIVE AND QUANTITATIVE ANALYSIS OF THE URINE, DESIGNED FOR PHYSICIANS, CHEMISTS AND PHARMACISTS. By Dr. C. Neubauer, Professor, etc., in Wiesbaden, and Dr. J. Vogel, Professor of Medicine in the University at Halle. New York: William Wood & Co, 1879.

This is a translation of the seventh German edition of Neubauer and Vogel's well-known manual of Urinalysis. It is a work which needs no commendation at our hands; it is a noble record of painstaking and untiring industry and scholarship. We are glad to be able to add that the translator (Dr. Elbridge G. Cutler), has done his work wisely and well — so well in fact, that the book, in its English dress, is readable and interesting.

I. N. D.

BOOKS AND PAMPHLETS RECEIVED.

Pocket Therapeutics and Dose Book. By Morse Stewart, jr., B.A., M.D. Second Edition. Revised and Enlarged. Cl., pp. 263. Detroit: G. D. Stewart, 1878.

Sixteenth Annual Report of the New York Society for the Relief of the Ruptured and Cripple. May, 1879.

Third Annual Report of the State Board of Health of the State of Wisconsin for the year ending Dec. 31, 1878. Paper; pp. 183.

The American Medical College Association. Third Annual Meeting, held at Atlanta, Ga., May 3 and 5, 1879.

Constitution and List of Members of the American Public Health Association.

On Some Points in Connection with the Treatment of Sterility. By A. Reeves Jackson, A.M., M.D. Reprint from Vol. III. Gynæcological Transactions.

Notes on Intra-Ocular Lesions Produced by Sunstroke. By F. C. Hotz, M.D.

An Argument made before The American Medical Association at Atlanta, Ga., May 7, 1879. By Edward S. Dunster, M.D. Reprint from *Physician and Surgeon*, June, 1879.

The Casual Lesions of Puerperal Convulsions. A Paper read before the Pathological Society of Philadelphia, April 28, 1878, and reprinted from the Transactions. By James Tyson, M.D. Philadelphia: J. B. Lippincott & Co.

Atlas of Histology, Part IV. By E. Klein, M.D., F.R.S., and E. N. Smith, L.R.C.P., M.R.C.S. Chicago: W. T. Keener; Philadelphia: J. B. Lippincott & Co.

The Future Influence of the Johns Hopkins Hospital on the Medical Profession of Baltimore. By John Van Bibber, M.D.

Transactions of the State Medical Society of Arkansas, at its Fourth Annual Session.

A PECULIARITY OF THE RICKETY PELVIS.—Prof. Depalu (*Gaz. des Hôp.*) has called attention to a deformity of the rickety pelvis, which is only occasionally observed. A pelvis thus affected presents, at certain points of the upper aperture, besides a contraction, some sharp, bony lamellæ, capable of cutting like a knife, corresponding in position to certain muscular insertions at the symphysis pubis, or the ilio-pectineal eminence. These lamellæ cause serious mischief; for on the head of the child pressing its uterine covering against their sharp edges, an incision or even true perforation of the uterine wall may be the consequence. In three such cases D. had known a true hole to have been produced, establishing a communication between the cavity of the uterus and neighboring parts. These bony projections, hidden by tendinous or muscular insertions, cannot be detected during labor.

TAPE-WORM IN A FISH.—A fishmonger in Berlin, who had lately received a considerable supply of fishes from the German Ocean, found a tape-worm of the length of two and a half meters in a carp. The worm belonged to the class *Coryophyllacus latus*, which species is occasionally met with in the intestines of the carp, pike and some birds who mostly live on fish.—*Hosp. Gaz.*

Summary.

Collaborators:
DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY.

PRACTICAL MEDICINE.

LARYNGEAL VERTIGO. Report of Clinic of M. Charcot. (*Le Progrès Médical*, April 16, 1879).

The above phrase was used by J. R. Gasquet in the *Practitioner* of August, 1878, but its corresponding French term, *Vertige Laryngé* was used by Dr. Charcot in a communication to the Society of Biology, Nov. 19, 1876. The following case is given as a specimen of several in virtue of which the name was suggested:

M. G., age 45; first attacked on the 20th July, 1878, with an ordinary bronchitic affection, which rapidly yielded to treatment, but there remained in the region of the larynx an almost constant tickling and burning sensation. This sensation increased, occasionally, all at once, and was followed by violent paroxysms of coughing. In the month of August M. G. was suddenly awakened out of sleep by one of these paroxysms. He got up, lost consciousness almost immediately, and a few minutes later recovered and found himself lying upon the floor. From this time these crises frequently returned, sometimes three or four times a day. Consciousness was always lost; sometimes he fell in the street, coming to himself in a few minutes without any derangement of ideas, but at the same time without any memory of what took place during the attack, remembering only the tickling sensation of the throat and the immediate appearance of vertigo.

According to the testimony of attendants, his face became congested and somewhat purple. Occasionally convulsive movements appeared in the face and limbs; no initial cry, no involuntary discharge of urine. He never bit his tongue and never experienced nausea or vomiting at the time of recovery. Laryngoscopic examination revealed no lesion.

The trouble disappeared in three weeks on the use of flying blisters to the region of the larynx, and heavy doses of bromide of potassium.

An observation, referred to by Dr. Charcot, recorded by Dr. Sommerbrodt (*Berliner Klin-Wochenschrift*, 25th Sep. 1876), informs us of a man, age 54 years, for some time the subject of attacks of apparent epilepsy with special laryngeal symptoms. A tumor of the larynx having been recognized and removed, the apparent epileptic attacks ceased. This case is quoted to show that such attacks may be brought on by an irritation of the larynx. In the other cases given no lesion of the larynx was observed.

Dr. Charcot recognizes two degrees in these attacks corresponding to the *haut mal* and *petit mal* of epilepsy. In the former case, complete loss of consciousness takes place, though it lasts but a few seconds, scarcely minutes; certain convulsive movements of the face were well marked. In the latter class the exciting cause fails to produce complete loss of consciousness and the other phenomena associated with the greater disturbance.

Its differential diagnosis from the true epileptic attack and from similar consequences associated with affections of the labyrinth is: it is always associated with a tickling and burning sensation or other irritation in the region of the larynx or upper part of the trachea. The loss of consciousness is of short duration; there is no stupid expression on the countenance at the close of the attack; no nausea or vomiting; no biting of the tongue; no involuntary discharge of urine, and no excessive sensibility of the organ of hearing preceding the attack.

PATHOLOGY.

HERVIEUX AND PASTEUR ON SEPTICÆMIA. The following abstract of a discussion, in the Academy of Medicine, in Paris, session of May 6th, 1879, between the distinguished author Dr. Hervieux and M. Pasteur, on the subject of the "germ theory" and puerperal septicæmia, is reported in *Le Progrés Medical*. May 10, 1879.

"In reply to a previous communication by M. Pasteur on puerperal septicæmia, M. Hervieux called attention to the obscurity which surrounds the doctrine of that illustrious experimenter. Is the supposed microbion of puerperal septicæmia the product or the productive cause itself of the malady? If the pathogenetic power is the attribute of the microbion, that parasite should be discovered only where puerperal septicæmia exists. Now, according to Pasteur, the microbion is found everywhere, in common water. On the other hand, all lying-in women who use water, either as a drink, or in injections, or for purposes of cleanliness, should be invaded by this infectious parasite. The mortality of these patients is too variable a factor to be reconciled with any such hypothesis. This great question of the almost exclusive predilection of puerperal septicæmia for certain localities — notably for the obstetrical wards of a hospital — can be resolved by a single word: *agglomeration*.

"How and why does the supposed microbion of puerperal septicæmia appear with its septic characteristics in a lying-in hospital? The organisms discovered by Pasteur in the blood and lochial discharges of two women who have succumbed to puerperal septicæmia do not prove that they were the productive cause of puerperal intoxication.

The force which we invoke, and which surpasses the energy of the so-called septic parasites, is a special poison engendered by crowding together the newly delivered mothers. The microbion is not the poison; it is the parasite of the poisoned tissue; it is as truly a parasite as thrush in the mouth of a patient with enteritis, or as the lice upon the scalps of young children afflicted with eczema capitis. The germ theory will never become really fruitful until clinical observation shall be in complete accord with physiological experiment. As for the application of the germ theory to puerperal septicæmia, M. Hervieux considers our observations of the hypothetical microbion of puerperal septicæmia as so many elements out of proportion with the fundamental facts of nosology. The microbion, reputed to be so fatal to the population of pregnant females, must be an ordinarily inoffensive parasite, for it is found everywhere, and can be very easily detected in water. It is only — according to the hypothesis — in certain conditions that it acquires the septic character, particularly when associated with the microbion which Pasteur considers as the generator of pus. It must, therefore, be a creature sometimes single, sometimes double, sometimes inoffensive and sometimes murderous in its character. It cannot, then, be like all other virulent agents, always identical with itself.

M. Pasteur expressed regret that he could not reply with facts of a positive, unquestionable and decisive nature, and declared that he had never announced the existence of a parasite peculiar to puerperal septicæmia (!) However, the facts which he had published appeared to him very encouraging and capable of explaining hypotheses which would probably at some future time become certainties.

M. Hervieux declared his willingness to agree with M. Pasteur from the moment of his acknowledgment of the non-existence of the puerperal microbion, provided only that he will busy himself with actual facts. "As for M. Pasteur's charge that I do not believe in the germ theory, I will reply that if such were not the case, I would not suffer myself to discuss the application of this theory to puerperal septicæmia, which would lead me to a blind application of the treatment which is its logical consequence."

THERAPEUTICS.

SYPHILIS IN RELATION TO MARRIAGE.—(*Gaz. des Hôpitaux*). The following are, in brief, the points made by Dr. Fournier in two lectures delivered in January:

A man may marry after having had syphilis, but he ought to marry only on certain conditions, which we must determine. One who marries with unextinguished syphilis is dangerous as a husband, father and a member of society.

1. He is dangerous as a husband, by reason of lesions to which his wife is exposed; and in two ways. One, by simple, vulgar contagion, in the intimate relations of conjugal life; the other, by placental contagion, the mother, being or having been pregnant, having contracted the disease from the infant, and not directly from the husband. Contagion through placental exchange is an absolute fact.

2. He is dangerous as a father. It should be held as a constant fact that a syphilitic father is a source of danger to the offspring; nevertheless, sypilitic heredity proceeding from the father alone, the mother remaining unaffected, is much less terrible than has been asserted. For an infant born of syphilitic parents there are three alternatives. (a) Either it is dead at birth, or (b) it will be born at term subject to the disease, or (c) it will survive with compromised health.

3. He is dangerous as a member of society. This consideration is too self-evident, and its moral and physical bearings too generally admitted to require reproduction. Let it be sufficient to call attention to the immense responsibility to society he incurs by marrying when thus infected.

Passing now to consider the conditions under which a syphilitic should be allowed to venture on matrimony, we find that they enumerate themselves as follows:

1. The absolute absence of actual symptoms. This cause of exclusion seems so obvious that it seems superfluous to insist upon it; yet we must not be deceived, for examples of this incredible and criminal audacity have been observed over and over again.

2. The advanced period of the disease. We may commit to memory this axiom — the younger the syphilis of the husband, the graver are the dangers he conveys by marriage; and conversely, the older the disease the more favorable the chances of escape. It is recent syphilis which causes most danger by contagiousness, and it is in the first six, ten or twelve months that its manifestations are more disseminated, dangerous and disposed to relapse. Nothing relapses like a condyloma, and we may see erosions of the mouth reproduced in smokers ten or twenty times within a short period. The recent accidents of syphilis are so much the more redoubtable, in that their favorite sites are the mouth and genitals — localities especially dangerous in relation

to contagion in married life. In the secondary stage, also, the phenomena are more dangerous only because apparently so benign and insignificant. In their apparent benignity is their greatest danger. The conclusion to be drawn is, that the advanced age of a syphilis is an essential condition for marrying. What should be its duration? This is an extremely delicate point, but in order to lay down a rule, we may say that a syphilitic should not dream of marrying until a minimum of four years has passed; and he had better wait still longer.

3. A certain period of immunity should have elapsed since the last accident. This offers a guaranty which is, for several reasons, necessary. For this period of repose we should fix a minimum limit of eighteen months to two years.

4. The unmenacing character of the syphilitic diathesis. There assuredly exist slight and grave syphilis; the former confined to a small number of superficial accidents, while the latter give rise to deep seated lesions, even when treated. Now the quality is a very essential condition to be considerd. The three principal types of the latter, or grave form, are: (a) That one remarkable for the incessant reproductions of the same accidents, though these may be very superficial. (b) Those which are grave on account of intensity, multiplicity and nature of the accidents produced, and which at an early period affect the tertiary form, become visceral, and remain refractory to treatment. (c) That which invades organs essential to life, e. g., the brain, cerebral syphilis being especially dangerous.

5. A sufficiently prolonged specific treatment. This is the capital condition, par excellence. We may at the present time affirm that syphilis treated energetically at its commencement, and for a sufficiently long time, has no tertiary period. Treatment also diminishes and suppresses the cause of contagion and chances of heredity.

Conclusions. To any syphilitic subject who does not fulfil the above five indispensable conditions, we ought to refuse marriage. Rarely will an imprudent person, who has married in spite of the advice of his physician, not have to repent it, while those who have married with the consent of their medical adviser have neither proved dangerous to their wives nor children.—*Med. Times and Gazette.*

Obituary.

IN MEMORIAM.—Theodore W. Stull, M.D., died at his home in Marengo, McHenry county, Illinois, of phthisis pulmonalis, May 8th, 1879, after a protracted illness. Dr. Stull was born in Smithport, Pennsylvania, in 1833. When six years of age his parents removed to Marengo, Illinois. He was reared upon a farm, received a common English education and taught school for a couple of years, after which he studied medicine, and was graduated at Rush Medical College, Chicago, Ill., Feb. 25th, 1861 He immediately sought a location for the practice of his profession in Missouri, where he remained but a few months. Upon the breaking out of the war, he returned to Illinois, and together with many of his young associates enlisted as a private in Company H. of the Eighth Illinois cavalry, which regiment was being raised at St. Charles, Ill., by Gen. Farnsworth. He was mustered into the U. S. service Sep. 18th, 1861. After the regiment reached Washington, Dr. Stull was appointed hospital steward, and July 1st, 1863, was promoted to assistant surgeon, in which capacity he served until mustered out at the close of the war. The regiment to which he belonged served with distinction in the Army of the Potomac, being engaged in most of the great battles fought by that army, and in many minor engagements in which the cavalry only took part. Both as soldier and surgeon Dr. Stull displayed a noble patriotism, a tender heart and a skill which reflected credit upon his Alma Mater. None but those who have served in a similar capacity can appreciate the responsibility resting upon a surgeon at the time of and after a great battle, or even a small engagement. And it is then that the man, as well as the skillful surgeon, can display his most brilliant qualities. In such positions Dr. Stull was cool, collected and thoughtful, and won the esteem of his fellow-surgeons as well as comrades. But in the desolation which epidemic disease caused in the camp during the long, weary winters, when typhoid fever, dysentery, diarrhœa, measles and small-pox threatened the destruction of our army, the endurance and skill of the surgeons were put to the most trying test. And as one who knows by his presence and participation in these labors, I must say that in camp and hospital Dr. Stull displayed his true worth, and none who received his kind and skillful attention and who lived to recover, but cheerfully give him credit for more than ordinary ability and untiring attention to his patients.

Being of a modest and retiring nature, his abilities were best known to his most intimate friends. At the close of the war he returned to his home in Marengo, Ill., and at once entered into a large and lucrative practice, which he successfully prosecuted until prevented from further labor by the disease which terminated his life. He was a member of the Fox River Valley Medical Association, and contributed much to the usefulness and prosperity of the society. April 15th, 1868, he was married to Miss Aurora M. Adams, of Marengo, Ill. He proved as devoted to his family and domestic life as to his profession. He leaves a wife and three daughters to mourn his early death. Thus are fast passing away the heroes of the late war; but their memories will be cherished by those who knew and could appreciate their worth while memory lasts, or the records of the late war are permitted to endure.

ABNER HARD.

AURORA, ILL., June 10th, 1879.

WE regret that in making up the July number an error was made, to the extent of leaving out sixteen pages; that is, from page 97 to page 112 inclusive. We will gladly rectify the error, if subscribers will return the imperfect copies.

We also regret that in some copies of the same number the lithograph illustrating Dr. Earle's article is inverted. This can be corrected when the volume is bound.

Items.

THE AMERICAN ACADEMY OF MEDICINE.—This association of physicians was organized September, 1876, at Philadelphia, during the sessions of the International Medical Congress, when Traill Green, M.D., LL.D., of Easton, Pa., was elected its first President. Subsequently, meetings were held in New York (1877), and in Easton, Pa. (1878), at which Frank H. Hamilton, M.D., LL.D., of New York, and Lewis H. Steiner, A.M., M.D of Frederick, Md., were respectively chosen as Presidents. At these meetings the organization was more thoroughly perfected, and numerous accessions were made to the membership.

The objects of the Academy are thus broadly stated in its Constitution :

First. To bring those who are alumni of collegiate, scientific and medical schools into closer relations with each other.

Second. To encourage young men to pursue regular courses of study in classical or scientific institutions before entering upon the study of medicine.

Third. To extend the bounds of medical science, to elevate the profession, to relieve human suffering, and to prevent disease.

The following extract from the Annual Address of Dr. Frank H. Hamilton, President of the Academy, September, 1878, fully explains the purposes of its institution :

"The founders of this society sought, especially, by its organization, to aid others who are engaged in similar effort in this country, but who are working by other means, to remedy a great, and universally admitted evil, namely, imperfect preparation for the study of medicine, and its almost inevitable sequence, imperfect qualification on the part of those who are admitted to practice.

“There are many things which we can do more or less effectively. We can labor to create a sound public sentiment, which shall in some measure influence medical colleges and medical men, but more especially to create a sound sentiment among the young men who are contemplating the study and practice of medicine. They must be persuaded that it is unbecoming for them to enter upon the study of a learned profession without suitable classical and scientific knowledge, and without mental discipline; that it is impossible for them without this knowledge and discipline to make any respectable attainments in the science of medicine, and that it is shameful for them to enter upon the practice of medicine, and attempt to minister to the physical sufferings of their fellow-beings, without a competent knowledge of their science.

“Almost the entire medical profession in this country, including even most of that very large proportion who have not had the advantages of a thorough preliminary training, are urging its utility or necessity; the medical associations have, in all parts of the United States, again and again declared its importance, and especially is this true of the American Medical Association. The American medical journals have unanimously insisted upon radical changes in this respect; the professors and the alumni of medical colleges at their annual commencements, and in their social gatherings, have reiterated the same sentiment; but the work of reform in this direction is not yet accomplished. They need further help, and we have put our hands together to help them.

“Our association is not intended as a substitute for any other association of medical men; but we propose to supplement their labors. We fully believe that we can be useful in some small degree, and we shall not cease our efforts or disband our organization, until the needed reforms are accomplished.”

The Fellows of the Academy must be Alumni of respectable collegiate institutions, who have received therefrom:

1. The degree of Bachelor of Arts, after a systematic course of study, preparatory and collegiate;
2. The degree of Master of Arts in accordance with the usage of these institutions;

3. The degree of Doctor of Medicine, after a regular course of study, not less than three years, under the direction and instruction of preceptors and professors. They must have also had an experience of three years in the practice of medicine.

Candidates for fellowship must be recommended by at least one Fellow, and be approved by a majority of the Council, after which the consent, by ballot, of two-thirds of the Fellows present will secure their election.

The initiation fee is $5.00, to be paid before initiation and registration.

Blank forms of application for fellowship can be obtained from the Secretary.

The annual meeting for 1879 will be held September 16, in New York. RICHARD J. DUNGLISON, M.D., *Secretary.*

P. O. Box 2386, Philadelphia.

HINDOO MEDICAL SCIENCE.— An appeal has been made by a Calcutta Baboo, named Rajendianath Datta, for a sum of 22,000 rupees wherewith to found a "free Ayur Veda College for the education of Hindoo physicians." The prospectus states "that in India, treatment, according to the Hindoo system of medicine, is generally more efficacious than that according to a foreign one. As our bodies are formed of and nourished by Indian materials, it would be against nature if medicines brought from foreign countries suit our constitution in time of illness. It is a fact greatly to be deplored that, owing to the influence of various social changes to which India has been subject, the hard earned gems of Hindoo medical science have become dim and soiled by disease, and are about to be lost and forgotten." If the Baboo cannot get the whole amount asked for, he is content to start on a smaller scale. That he relies stongly on the "gems of Hindoo science" is evidenced by the item in the monthly estimates for the purchase of "rare medical works from distant places," twenty-five rupees, which would certainly, at the present rate of exchange, represent a very modest library fund.—*Hosp. Gaz.*

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, August 4 and 18.
West Chicago Medical Society—Mondays, August 11 and 25.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.

Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.

Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.

Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.

Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.

Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.

Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.

Woman's Medical College—11 a. m., Ophthalmological, by Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

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[In these pages dimension and weight are expressed in terms of the Metric System, and temperature in degrees of the Centigrade Scale.]

Original Lectures.

ARTICLE I.

CHRONIC RHEUMATIC CARDITIS; SENECIO AUREUS AS A REMEDY IN THE RHEUMATIC DIATHESIS, ETC. Clinical Lecture delivered in the Medical Wards of the Mercy Hospital, June 13, 1879. By N. S. DAVIS, M.D., of Chicago.

Gentlemen of the class: On this, the last clinical day of the present college term, I bring to your attention a case which will fairly represent a class of cases sufficiently numerous and important to claim your careful study.

This man, aged about 50 years, a resident of the interior of the state, by occupation a farmer, and presenting the outward appearance of good physical development and fair nutrition, was admitted to the hospital yesterday, and gave the following history and symptoms: Had enjoyed good health until about five years since, when after severe exposure to cold and wet he was attacked with sub-acute articular rheumatism. From this he apparently recovered in a few weeks and resumed his ordinary work, but has ever since been subject, especially during the cold and wet seasons of the year, to more or less rheumatic pains, more generally in the back, hips and left side of the chest. During the last year, he says, he has felt almost constantly, a dull, heavy, uncomfortable feeling below the left nipple, and sometimes extending to the left shoulder and arm ; with shortness of breath and excited action of the heart on walking quick or going up stairs. It is chiefly on account of the continuance and rather steady increase of these latter symptoms, that he has sought admission to the hospital for treatment. He has some degree of constipation, and much of the time his food is slow in digesting, giving rise to gaseous eructations and sometimes vomiting. The urinary secretion is nearly natural, though sometimes scanty and highly colored. Percussion reveals nothing abnormal in the chest, unless it be a very slightly increased area of the cardiac dulness. Neither does auscultation afford any morbid sounds connected with respiration, but if each of you will in turn take the stethoscope and listen over the cardiac region, you will hear a well marked, moderately rough sound immediately following the systole or contraction of the ventricles, and rendering the interval between the first and second sounds of the heart indistinct. If you adjust the funnel of your stethoscope to different parts of the cardiac space, you will find the morbid sound or bellows murmur most loud and distinct about one inch in a direct line below the left nipple, which is nearly over the apex of the heart. This, with the fact that the sound follows the systole, indicates the mitral valve or left auriculo-ventricular opening as the special place of obstruction. While listening to the cardiac sounds, you also become conscious that the impulse of the heart is greater than natural, because it imparts undue motion to the walls of the chest. By this increased force of impulse, coupled with some increase in the area of cardiac dullness before mentioned, it is evident that there is moderate hypertrophy of the muscular structures, as well as thickening of the mitral valve, in this case. It is equally evident, from the history of the patient, that these pathological conditions have originated from rheumatic inflammation involving the endocardial membrane of the left cavities of the heart, probably commencing with the first attack of general rheumatic fever four or five years since. It may have escaped attention at that time, and so far disappeared with the subsidence of that general attack as to leave only slight thickening and irritability of the cardiac valve, yet each subsequent renewal of rheumatic trouble has increased this, until the cardiac changes have now become well marked and permanent. Such cases as this, strikingly illustrate the importance of the injunction I urged upon you so emphatically when lecturing on the general subject of rheumatism, namely, that the physician while attending any case of acute or subacute rheumatism, should note the condition of the heart by careful auscultation at every visit. He should do so, not merely because the cardiac structures become so frequently involved, but because early detection, followed by judicious and persistent treatment, will generally prevent those changes, that if neglected are almost certain to become permanent, and, sooner or later, disastrous to the patient.

Pathology: You will best understand the nature and tendency of the cardiac changes in this and similar cases, if you recall what has already been taught you in regard to the nature and effects of rheumatic inflammation in other structures. The exudations in rheumatic inflammation are pre-eminently plastic, leading readily to thickening and induration of the fibrous or connective tissues in any part of the body. The thickened and hardened condition of the ligaments of the smaller joints in the hands and feet, resulting from persistent or frequently recurring rheumatic attacks, is familiar to you all.

So when the endocardial membrane lining the left cavities of the heart, of which the mitral valve is a part, becomes the seat of rheumatic inflammation, strictly parallel changes result. If the inflammation assumes a chronic form, or frequently recurs, the consequent thickening and hardening of the membrane, especially that part of it entering into the valve, becomes permanent, and necessarily presents more or less obstruction to the easy flow of the blood from the left auricle into the ventricle.

It is this obstruction, presented by the altered state of the valve, that causes the rough or bellows murmur you have heard just after the impulse or systole, in the case before you. The obstruction thus established between the left auricle and ventricle constantly tends to keep the auricle over-full of blood, and the ventricle correspondingly deficient in its supply. In the early part of the history of such cases, while the obstruction is slight, the patient feels but little inconvenience while quiet and the heart is acting slowly, because under such circumstances the ventricle receives a fair supply of blood between each systolic contraction. But when by active exercise, exertion, or mental excitement these contractions are made more frequent, the walls of the ventricle contract on an inadequate supply of blood, and not only the auricle, but the pulmonary veins also, become over full and the breathing oppressed. A little reflection will show you that such a state, continuing through months and years, would almost necessarily induce a progressively increasing concentric hypertrophy of the walls of the left ventricle, with diminution of its capacity, and corresponding increase of capacity and fullness of the left auricle and pulmonary veins, with more or less constant shortness of breath and sense of oppression in the chest. When this stage has arrived, and the movable volume of air received into the air cells of the lungs is diminished by the habitual pressure of the over-full pulmonary capillaries, the blood itself becomes imperfectly oxygenated and decarbonized, and consequently cannot afford the natural degree of stimulus, either to nervous sensibility or secretory action. From this come feelings of langour, lassitude and indisposition to active physical or mental exertion, on the one hand; and on the other, indigestion from deficient gastric secretion, constipation of the bowels, and scantiness of urine. Finally, under the continuance and steady progress of these influences, the patient's breathing becomes so oppressed that he cannot assume the recumbent position at night; the heart's action becomes unsteady or intermitting; the digestive organs much disordered; the urinary secretion very scanty, and often albuminous; the general capillary circulation enfeebled, with general tendency to œdema, especially of the lower extremities or whatever parts are most dependent. Having reached this stage, the further progress of the case places the patient in an extremely distressing condition. He is constantly weary and desirous of sleep, yet so oppressed for breath that the sense of suffocation arouses him every few moments, both night and day; the urine becomes so nearly suppressed that nervous twitchings and other symptoms of uremic poisoning are often present; and the œdematous infiltrations not only fill all the exterior areolar tissues, but the serous cavities, and the pulmonary tissue, the latter often being the immediate cause of a fatal result. Cases of this form of cardiac disease vary greatly in the rapidity of their progress. Some will pass through all the stages I have described to you, reaching a fatal result in one or two years; while others will progress so slowly that the patients are able to transact business most of the time for ten or fifteen years, and do not reach a fatal result in twenty years.

Prognosis: After the detailed account I have given you concerning the nature and extent of the changes taking place in the class of cases under consideration, it is hardly necessary to add that the prognosis, so far as it relates to ultimate recovery, is always unfavorable. Yet very much can be done by judicious treatment, especially in such cases as are brought under the care of the physician early, both to mitigate the suffering of the patient and to prolong his life. So true is this, that no patient of this kind should be abandoned by his physician, merely because he cannot be actually cured; for the obligation to mitigate suffering and prolong life, is as binding upon the physician as is that of curing disease. And I may add, that in no class of incurable diseases can the judicious and skillful physician be of more real service to his patient, than in those involving the structure and functions of the heart.

Treatment: I need only remind you that in a primary attack of rheumatic endocarditis, the most efficient anti-rheumatic treatment should be promptly resorted to and continued, if possible, until all physical signs of cardiac trouble have ceased. But when called to cases like the one before you, in which the acute or primary attack has long since passed by, and the cardiac changes have become permanent, what are the indications for treatment, and what the means best calculated to fulfill those indications? If you have clearly perceived the nature and order of progress of the symptoms, as I have endeavored to describe them to you, there should be no difficulty in your recognizing two well defined indications to be constantly kept in view in this and all similar cases; namely, to counteract or overcome the rheumatic susceptibility by which the patient is made constantly liable to exacerbations from slight atmospheric changes, or other causes; and to keep the heart's action sufficiently slow to allow sufficient blood to pass through the obstructed auriculo-ventricular opening to fill the ventricle between the systoles.

In proportion as we can accomplish the first, we shall prevent or retard the further thickening of the valvular structure and the parts to which it is attached. And so long as we can maintain the second, we shall keep the patient free from dyspnœa and the whole train of evils resulting from the incomplete oxygenation and decarbonization of the blood.

The means best adapted for overcoming the rheumatic diathesis or morbid susceptibility of the structures, embrace both hygienic and remedial agents. For instance, the patient should have a warm alkaline bath every three or four days. When he comes out of the bath, the water should be wiped off quickly with ordinary towels, and the whole surface briskly rubbed with dry, soft flannel. This brings a pleasant glow of electric warmth to the surface, and renders the skin healthy and active.

Thick and warm underclothes of flannel should be worn all the year except July and August, during which months light canton-flannel may be substituted in place of the thicker cloth.

The air of the patient's apartments should be dry and well ventilated; his exercise moderate but habitual; his diet plain, nutritious, but not rich or highly seasoned; and his drinks unstimulating. To these may be added a protracted use of some medicines, with a reasonable expectation of benefit.

In these purely chronic cases I have, for many years, used different preparations of the cimicifuga, the phytolacca, and the stramonium, either singly or combined in various proportions, and with considerable benefit. Nearly two years since, my attention was called to the use of the senecio aureus as a remedy of value in relieving chronic rheumatic irritation in any of the fibrous structures of the body, and especially for removing that state of morbid sensitiveness we call the rheumatic diathesis. I had under treatment at the time a delicate girl, nine years of age, who had been attacked four years previously with severe acute rheumatism, that involved in its progress nearly all the articulations and the left side of the heart. After a protracted period of suffering, she recovered, leaving a well marked rough bellows murmur over the left cardiac region, with the usual embarrassment on taking active exercise. She had continued extremely sensitive to atmospheric changes, and had renewed attacks of rheumatic fever, with swelling and pain in some of the articulations, and increased cardiac disturbance, two or three times a year, in spite of the most vigilant precautions. She spent one of the winters in Florida, but had a renewal of the rheumatism in a few weeks after her return. It was at this time that a friend of the child's father told him, if he would get some senecio aureus root, put it into whisky, and give the girl some three times a day, it would cure her. The positive assurances of the friend evidently made an impression on the father's mind, and induced him to call my attention to the matter. On referring to such books as were at hand, I found the article named in the list of secondary articles of the Materia Medica, with no other account of its virtues than the statement that it was reputed to possess moderate diaphoretic and diuretic properties. Thinking that it would do no harm to gratify the father's desire to try the remedy, and finding no preparation of it in the drug-stores except a small quantity of fluid extract, the little patient was put upon the use of this, commencing with 0.3 C. C. three times a day. Subsequently some fresh root was procured, and a perfectly reliable fluid extract prepared for her use. The dose was gradually increased to 0.6 C. C., and its use was continued faithfully seven or eight months. No other remedies were used, and no changes were made, either in hygienic management or residence; but from the time she commenced to take the remedy, until the present time — nearly two years — she has not had the slightest return of rheumatic irritation, and has slowly increased in flesh and strength, and is now able to exercise quite freely with her playmates. There is still an audible murmur over the left side of the heart, but much less rough and harsh than two years ago. At no time during the use of the remedy has there been observable any active disturbance of the functions of the system. From the first, her appetite began to improve, and the functions of the skin, kidneys and bowels have been performed with entire regularity. Only once has there been need of medical interference, and that only for two or three days, on account of slight sore throat.

Of course the result in this case, standing alone, would prove nothing. The use of the remedy and the subsequent change in diathesis might be a mere coincidence. But during the past year or eighteen months I have prescribed the remedy in the form of fluid extract in a large number of cases, and with sufficiently favorable results to justify you and the profession generally, in making a thorough investigation concerning its value and remedial properties.

While on this subject, there is one important error concerning which I wish to caution you, and that is, the tendency, when treating chronic diseases, and especially when endeavoring to correct morbid diathesis or constitutional conditions, to change remedies too often. We are apt to forget that most of these conditions are the result of slowly acting causes, and involve alterations in the inherent properties of the tissues that can be changed back in the direction of health only by slow and persistent influences, both of a hygienic and medicinal character.

The senecio aureus is a plant that grows in sufficient quantities throughout the northern belt of the United States, and is familiar to medical botanists.

In fulfilling the second indication, namely, to keep the systolic action of the heart slow enough to allow the blood to pass fully from the left auricle into the ventricle, and thereby prevent too much fullness of the pulmonary veins, we must rely upon the judicious regulation of the patient's exercise, both mental and physical, and on the employment of such sedatives as will control the vascular excitement with the least tendency to impair the functions of digestion and assimilation. If possible, the mind of the patient should be occupied with some light, cheerful business, that does not involve intensity of application or anxiety ; and all his physical exercise should be light, habitually in the open air, but studiously avoiding all hurry or sudden violence. So long as the functions of respiration and digestion remain good, and the action of the heart steady, no special cardiac sedatives may be necessary. But whenever the obstruction is such that the action of the heart becomes habitually frequent or unsteady, and the breathing short and oppressed from slight exercise, a judicious use of digitalis will be of great value. For an adult, it is well to begin with doses of 1.3 C. C. of the ordinary tincture, or 0.8 C. C. of a good fluid extract, and repeat it every four hours until the pulse is reduced a little below the natural standard of frequency; then lengthen the interval between the doses, just enough to maintain the steady, slow beat, without further depression. The greater permanency of the action of the digitalis, and its less liability to disturb the stomach, make it preferable to most of the recognized arterial or cardiac sedatives, in this class of cases. In addition to these general indications, nearly all the cases that come under the observation of the physician require more or less collateral attention to the digestive organs and kidneys. You will remember that the patient before you suffers more or less from indigestion, characterized by acid and gaseous eructations and sometimes vomiting, with more or less constipation. To correct this, something that will act as an antiseptic and sedative to the irritability of the gastric mucous membrane is needed. I have found nothing that would fullfil these requirements better than small doses of carbolic acid and gelseminum, given just before each meal and at bed-time. Indeed, we may include nearly all the remedies indicated in the case before you, in the following prescription:

℞	Acid carbolic (crystal).........	0	40	grams.
	Glycerine (pure)................	16	00	"
	Tinct. gelseminum	16	00	"
	Tinct. digitalis......	32	00	"
	Fl. ext. senecio au.............	96	00	"
	Mix.			

Give five grams, or an ordinary teaspoonful, in a little water, just before each meal and at bed-time. The steady use of this, with due attention to diet and exercise, and the avoidance of all use of alcoholic drinks and tobacco, will probably do as much to counteract the rheumatic diathesis, regulate the action of the heart, improve digestion, and thereby prolong the life and usefulness of the patient, as any course of treatment we could suggest.

Original Communications.

Article II.

A Case of Transfusion. By F. W. Epley, m.d., New Richmond, Wis.

Mrs. B., married, aged 37, (?) was the mother of four children, two of whom are now living, the other two having died in infancy, of a wasting disease; "they simply pined away and died without a symptom of pain or local trouble;" at least it was so stated. Mrs. B. usually enjoyed good health until her present sickness, with the exception of a "spell of ill health" when about 19 years of age. Her present sickness began about the middle of December, 1877, with an attack of what was then thought to be biliousness, from which she partially recovered, so as to be able to walk about some; soon, however she began to decline, growing anæmic, weak and languid; she seemed to be wasting away exactly as her children had done. She was treated by her home physician without effect; then went into the hands of a homœopathic physician, in whose care she remained until April 18, 1878, when I saw her for the first time, and was struck by the peculiar, almost post mortem appearance of the patient. The expression of her face was one not easily forgotten. Her eyes were glassy, sclerotic, very white; lips, gums, tongue and conjunctival membrane white and dry; lips and tongue peeling; cheeks flabby; skin dry and scaly. Has no appetite; eats a little potato and sucks the juice from a little steak; and even the small amount of food taken passes right through the canal in almost exactly the same condition in which it was taken; in fact she digests nothing — has six or seven loose discharges from the bowels daily. Complains of no pain or soreness anywhere; says there is none. Converses very plainly but slowly; sentences disconnected. Upon examination, as I placed my open hand over the epigastrium, making gentle but firm pressure, she exclaimed, "Oh, he's found it." There was no soreness to be found anywhere else, but she could bear but the slightest pressure at this point without producing a most unbearable, sickening pain. I immediately put her upon lactopeptine and bismuth, with tonics, dialyzed iron, etc., with the effect of arresting in a measure the diarrhœa, but otherwise her condition remained about the same, except that she grew daily weaker, so that, by the 27th of April, she could hardly move her hand or head. Medicine had little, if any, effect upon her. The indications plainly were to get her to make blood. This I could not do, so I decided to introduce by artificial means the much needed element. Accordingly (having read in the January number of the *Monthly Abstract of the Medical Sciences* for 1877 an article in which the hypodermic injection of blood was followed by good results) on the 27th of April I proceeded to introduce about 8 C. C. of defibrinated blood under the skin of my patient's arms, making four punctures, the last of which I tried to introduce directly into a vein, and happened to succeed — not a very easy thing to do, I have since discovered, even when the veins were well distended. She hardly felt the several punctures. An ecchymosed spot was produced at the point of each puncture, except the one which entered the vein. The following day I thought I could detect an increase in pulse rate and volume. I find recorded in my diary for that date: "Pulse much stronger, slower and fuller to-day, but she has failed otherwise. Passes urine and fæces involuntarily." Ordered vitalized phosphates added to her list of remedies, which now amounted to lactopeptine and dialyzed iron. On the 29th Dr. Otis Hoyt saw the patient with me, said he could suggest nothing except another operation soon.

May 1st. — Is delirious; takes nourishment very badly; does not arouse readily.

I would here express my regrets that my notes on the case are so brief; I had so little hope of saving or helping my patient, that I had little care about making notes. After the introduction of the first blood on the 27th, the skin seemed gradually to become more sensitive, and when, on the 5th of May, I repeated the operation, she felt the pain very acutely. The blood was taken from the arm of my student and assistant, Mr. Jackson (as, indeed, was the first), defibrinated and kept, by means of a water bath, at a temperature not less than 33° C., and was introduced by six punctures directly, or as nearly so as possible, into the vein, about 2 C. C. at each puncture. The next day there was a very noticeable increase in volume and strength in the pulse; also a slowing. From this time forward she steadily improved; the effect being rather a decided and lasting tonic or stimulant to the whole organism, than otherwise.

On the night of May 9, I was summoned in great haste, and found her suffering very acutely from phlebitis in the left lower extremity (temperature 103° F.— 39 3-5 C.—pulse 120), which gradually subsided under appropriate treatment. Afterward, during her convalescence, she had repeated attacks of local inflammations, such as pleuritis, pneumonitis, etc.; not very severe in character, but causing considerable pain at the time. Notwithstanding all this she steadily and daily improved, until, on the fifth day of the July following I took her out to ride. Has had almost constant wandering neuralgic pains the past two months, but these are subsiding now. After her first ride, she rode a little every day, and on the 14th of July she rode over to my office, a distance of about six miles.

She continued to improve until she was better, and weighed more than she had for several years. Her cheeks were rosy, lips red, eyes bright and expressive. She enjoyed good health after this until about the middle of the following December, at times her servant girl leaving her to do all the work for five or six in the family, for six weeks at a time. She was a woman of extraordinary ambition, not only in home, but in public affairs; being even during her illness the instigator of and the leading spirit in a movement by which a very neat church was built. About the middle of December, after having overworked herself on a piece of heavy sewing, she became nauseated, soon vomited quantities of biliary matter, mucus, etc.; skin became icteric, and she began to decline. She visited me at my office several times, and I prescribed various remedies, but all to no purpose;

she gradually grew worse, and on the 30th of December I saw her at her residence, flat on her back, vomiting large quantities of biliary matter, mucus, etc. Had no appetite, sleep very much disturbed, and was unable to raise her head without nearly fainting. Prescribed strychnia, Gm. .0006, 3 times a day.

Jan. 1. Seems better in every respect, except color fading from mucous membranes. Vomits nothing, and is hungry. Sordes gathering on teeth and gums.

Jan. 3. Has vomited a large amount of ropy mucus and undigested food during the last twenty-four hours. Has no pain anywhere, but cannot have her head raised on account of vertigo. Prescribed pancreatine, and nourishing aliment, etc., continued.

Jan. 5th.—Pulse 114, temperature 38 8-10 ; sleeps badly and is nauseated. Raises no mucus nor bile. Movements from bowels pasty but regular. Complains of very bitter taste in mouth, especially after taking milk. Began menstruating ; discharge scanty and light colored. Has no appetite ; takes from one to three raw eggs a day ; does not like to take milk on account of the very bitter taste it produces ; constant, distressing nausea, controlled by small doses of bism. subnit., and morphia when required. Eye bright, sclerotic, snowy white, like the " celestial eye," described by good old Professor Freer.

Jan. 8th. — Great tenderness on hepatic region and right mesenteric glands ; almost faints at a touch in that locality. Is vomiting again large quantities of yellow looking matter, which, however, do not respond to the tests for bile. Bowels constipated ; ordered enema, to be followed shortly by beef tea per rectum, with counter irritants to epigastrium, and acid nitro-muriatic .12 C. C. every third hour ; and stopped pancreatine and strychnine.

Jan. 9th.— Pulse 108, temperature 38 3-10° C., tongue pale, skin on lips dry and peeling ; is drowsy all the time. Has beef tea regularly per rectum, and fluid nourishment per stomach, all she can dispose of.

Jan. 11th. — Has failed rapidly since I last saw her ; seems stupid ; sensibilities benumbed ; eyes dull and hair dry. Vomited, last night, a large quantity of horrible-looking stuff — masses of ropy mucus, slime and a substance resembling chopped meat (which she has not eaten in nearly a week). Pulse, 120 ;

temperature, 38.8. She is sinking so fast I shall transfuse to-morrow.

Jan. 12th. — Transfused 10:30 a. m. Before the operation: pulse, 116, quick, weak and thready; temperature, 39.2° C.; respiration labored and sighing; sentences broken; lips, tongue and gums white, no signs of blood in them; bowels constipated; has no appetite. Passed a pretty good night, but when awakened, complained of an indescribable feeling of oppression, exclaiming in broken accents, "Oh dear! oh dear! what shall I do." Nausea constant and distressing. No salivary secretion to moisten food with, so she rolls it out of her mouth, after sucking the moisture from it. Lips covered by thick, dead skin, which peels off, leaving a pale, shriveled fold, with only the faintest tinge of a dirty pink color.

Operation. — 150 C. C. of blood was taken from the radial vein of Dr. C. F. King, who assisted me in the operation, defibrinated and kept, by means of a water bath, at a temperature not exceeding 36° C. The radial veins of each arm of the patient, respectively, having been previously partially anæsthetized locally by means of the ether spray, were opened, the canula of an instrument made by Sharp & Smith, of Chicago, expressly for this purpose, and in the form of a very large hypodermic syringe with blunt points, was inserted, and 4 C. C. injected into each vein, only 8 C. C. in all being used. This would seem a very small amount, but I am convinced that it was all the patient could stand at once, or at least, that more would have been worse than useless, for the result left nothing to be desired, and was truly marvelous. Thirty minutes after the operation the pulse fell to 98 — full, soft and regular. A sensation of warmth and tingling was felt extending to the ends of the fingers and toes. We left her one hour after the operation, calling for something to eat.

Jan. 13th. — Passed a first-rate night; slept well; had none of the feelings of oppression on waking experienced just before the operation. Felt strange sensations of prickling in arms, legs and fingers. Strange phenomena of vision occurred during the afternoon and night after the operation — "knitting needles in the air, spools of thread rolling around the room, etc." While making my visit to-day, being momentarily out of the room, "a perfectly transparent straw" made its appearance before her, whose ends she could point out, and could bring her finger down upon it from above; said she "toyed with it for some little time; knew it was not a straw or anything else tangible, but regarded it as very singular." Pulse 98, soft and full; temperature, 38.8 C. Lips cleaned off, and show considerable color. Respiration easy. Talks with some vigor.

Jan. 14th. — Sat up over an hour to-day, with no disagreeable symptoms whatever. Appetite good. Relishes food well. Wandering pains appear, as after the first operation, nine months ago. Pulse 90; temperature, 38. Respiration normal. Voice strong and steadier, though a little tremulous yet. Disturbances of vision abating, but still exist.

Jan. 16th. — Some headache to-day. Pulse 90, and good; temperature, 37.3. Bowels moved by enema. Cheeks flushed; lips quite red. Sat up two hours to-day without fatigue.

Jan. 18th. — Sat up most of the day. Feels well; sleeps well; has good appetite; talks well, and feels strong. Pulse 90, full and strong; temperature, 37.7 C. Veins quite full and dark.

Jan. 20th. — Has sat up most of the day. Veins full; circulation splendid. Pulse, 90; temperature not taken. Eats and sleeps well. Nothing abnormal, except slight stiffness of joints.

Specimens of blood were taken at intervals, and sent to Prof. I. N. Danforth for examination; one just before operation and one 24 hours after.

From this date — Jan. 18th — she went on making a much more rapid recovery than before. But, unfortunately, her ambition domineered over her judgment. Having been twice so near the grave and recovered, she began to think she was not born to die easily, and after three months more of health, she exposed herself to the cold and fatigue, drove a vicious, awkward horse, which became frightened and backed her down an embankment into a ditch — frightening her badly, and causing severe nervous shock, sending her into another decline, into the hands of homœopathy, and the grave, on the 16th of April, 1879.

The autopsy was made 20 hours after death, and specimens of the result forwarded to Prof. Danforth on the following morning.

NEW RICHMOND, WIS., May 30, 1879.

The morbid specimens sent by Dr. Epley presented no marked lesions. The surface of the gastric mucous membrane was here and there eroded, and was everywhere extremely pale and bloodless; the same is true of the section of small intestine. The right kidney was pale and slightly granular. These several appearances were probably due to absence of assimilative power or starvation, rather than to the ravages of any active pathological process. There is a marked contrast between the microscopic appearance of the red corpuscles before and after the last transfusion. Before the transfusion they appear shriveled, pinched and irregular at their edges; a few days after the transfusion they are comparatively plump and full. There is also a slight difference in the relative number of the white corpuscles in the two specimens, the last one presenting a notably less number than the one drawn previous to transfusion. The case seems to present a strong argument in favor of transfusion in instances of extreme anæmia coupled with mal-assimilation.

I. N. D.

ARTICLE III.

THE ADMINISTRATION OF CHLOROFORM. By WM. MEACHER, M.D., of Portage, Wis.

I believe that the administration of chloroform is not rightly understood by many medical men, and many physicians, as well as patients, are afraid of it. But it is pretty certain that most if not all of this comes from the want of a proper knowledge of its use, and there is but little doubt that nearly all the deaths which have occurred under chloroform were not due to any fault of the anæsthetic, nor to any diseased condition of the patient, such as fatty degeneration of the heart, etc., as is commonly supposed, but to faulty administration, and might have been prevented. Again, it is commonly believed that patients with disease of the lungs, or heart especially, ought not to take chloroform. Yet, as a rule, there is no objection to their taking it. I know these are broad assertions, but I am convinced that they are true. Mr. Syme used to say, that any case for operation was a case for chloroform; and Mr. Lister says, that patients with disease of the heart ought not to undergo an operation of any importance without chloroform. "It might be expected," he further says, "that chloroform in the early or exciting stage of its operation, would act upon a diseased heart like mental emotion and cause irregularity, or cessation of its contractions; this, however, does not seem to be the case, and judging from my own experience, I should say that it tends rather to remove intermission or irregularity of the pulse. On the whole I believe that chloroform, by preventing shock and mental effort during the operation, as well as anxiety before it, is in reality a great source of safety in heart disease; and if a person with known cardiac affection decides to place himself in the hands of the surgeon, so far from being unsuited for the anæsthetic, he is, before all others, the man who stands most in need of its protecting influence."

I think I am correct in saying that most physicians, in administering chloroform, direct their attention almost wholly to the pulse, while the fact is, it requires no attention at all. This is what Mr. Lister says: "The very prevalent opinion, that the pulse is the most important symptom in the administration of chloroform, is certainly a most serious mistake. As a general rule, the safety of the patient will be best promoted by disregarding the pulse altogether." It is the breathing that is to be attended to. Here lies the whole secret. Now, in watching the breathing, it is not enough to see that the respiratory movements of the chest go on—that is, expanding and contracting—but that air enters the lungs; or in other words, that the patient is really breathing; because the respiratory movements of the chest may be going on, apparently all right, yet not a bit of air going into the lungs. Right here is where the danger comes in. This is not caused, as has been supposed by the "tongue falling back," nor by paralysis of the muscles which hold up the epiglottis, allowing it to fall back as in deglutition; but by portions or folds of the mucous membrane at the rima glottidis—properly speaking, the aryteno-epiglottidean folds—falling together, as it were, and obstructing the opening into the larynx. Mr. Lister demonstrated this by a series of experiments upon himself. This occlusion of the air passage generally occurs before the patient is fully under the influence of chloroform, and is usually preceded by stertorous breathing, but sometimes it is not, the breathing being shut off so quietly that it is unnoticed by any one except the person on the lookout for it. This the administrator should attend to, from first to last, and when it occurs, the proper thing to be done is this: Cease the administration at once, lay hold of the tongue with a napkin or a piece of cotton cloth, to prevent the fingers from slipping, or, what is better, seize the tongue with a pair of polypus forceps, or hook a tenaculum into the base of it, and draw it out steadily and quite strongly. After this traction on the tongue has been made a very short time, the air will be heard to rush into the lungs with a loud noise, similar to the inspiratory noise a person makes in snoring, when the breathing will go on again all right, and the administration may be resumed. To illustrate this point, I must quote more from Mr. Lister: "As an example of the risk that is run by want of close attention the respiration, I may mention the following case: A surgeon of considerable experience was giving chloroform to a patient on whom an operation was being performed, of which I was a mere spectator, but I noticed that stertorous breathing came on and gradually passed into complete obstruction, while the administrator was not aware of it. Seeing that the patient was in danger, I suggested to the giver of the chloroform the propriety of drawing forward the tongue; he replied that this was uncalled for, and pointed to the heavings of the chest as evidence that the breathing was proceeding freely. Knowing that these efforts were doing nothing for the respiratory function and feeling that there was no time for discussion, I stepped out of my province so far as to seize the tongue myself and draw it forward, when a long and loudly stertorous inspiration demonstrated the necessity for the interference. Had the delusive movements of the chest been trusted to, it is probable that they might have continued until the heart had become so enfeebled by the asphyxiäted state as to cause no perceptible pulse at the wrist; and had death occurred under the circumstances, the case would have been set down as one in which the heart failed first. The administrator would have been absolved from all blame, and the fatal event would have been attributed to idiosyncrasy, or to disease of the heart."

To sum up, then, a very few words will suffice for describing the proper mode of administering chloroform. Sprinkle about a drachm on the middle of a folded napkin or small towel, and hold it to the patient's nose and mouth, taking care that free space is afforded for the access of air beneath its edges; meanwhile watch the breathing closely, and if at any time it should become obstructed or strongly stertorous, suspend the administration and draw the tongue firmly forward until the obstruction to the breathing has disappeared.

At the time Mr. Lister's article, from which I have so largely quoted, was published, he said the method I have just described had been pursued at the Edinburgh and Glasgow infirmaries, two of the largest surgical hospitals in Great Britain, for nine years, without a single accident; and he concludes that, "chloroform in the hands of competent persons is a safe anæsthetic."

There is no doubt but ether is the safer anæsthetic, in the hands of those who do not rightly understand the administration of chloroform. For this reason, I suppose, and because it is an American discovery, it is the anæsthetic recommended by most of the medical colleges in this country. But ether is inferior to chloroform in several respects. It is generally much more disagreeable to the patient and troublesome to the surgeon, especially in private practice, and in operations requiring great delicacy of manipulation and perfect quiet of the parts being operated upon, such as operations upon the eye, etc. Also in obstetrical practice.

ARTICLE IV.

SUNDRY FACTS, OPINIONS AND SUGGESTIONS DERIVED FROM THE OBSERVATION OF FORTY CASES OF TAPEWORM. A Paper read before the Chicago Medical Society. By JOHN BARTLETT, M.D., of Chicago.

MR. PRESIDENT: — I have been led to believe that a summary of my experience, derived from the observation of a number of cases of tapeworm, would be acceptable to this Society. Accordingly I have jotted down, necessarily in a somewhat desultory manner, such facts, opinions and suggestions as seem of interest.

It is stated, in all accounts that have fallen under my notice, that the very great majority of tapeworms seen in this country are of the variety known as tænia solium. Just the contrary is my experience. Of about 55 tapeworms examined by me, 54 were T. mediocanellata, and one, T. lata. It is also stated that most frequently in this country the worm originates from the use of measly pork. In almost every case that I have treated, the patients stated that they were in the habit of eating rare beef, and that they seldom ate pork.

The length of the worm, it appears to me, has been grossly exaggerated. We hear of worms several hundred feet in length; and in the daily papers I have read of 600 feet of worm being extruded. To account for the disagreement in observers as to the length, I note first, that the tapeworm is very elastic, and that it has the power of contracting and extending itself.

Thus the proglottides, the segments which pass the body, elongate and contract, so that at one moment they are eight times longer than they are broad; at the next instant they are twice as broad as they are long; and the neck, which is generally as stated by writers, threadlike, sometimes shortens and thickens remarkably, as in the specimen before you. Now it is possible that a worm may be at one time 25 feet long, and at another 50; but I have never seen one which measured more than 25 feet when disentangled and laid out on the floor, and I think the majority will fall short of that measurement. As to the very long worms which have been reported, I incline to think that they may be likened to the zeuglodon of Col. Wood's Museum. This petrifaction was genuine, doubtless, but its vertebræ, which coiled indefinitely around the hall, represented pieces from a whole family of zeuglodons. To my mind, there is little doubt that the very long tapeworms of authors have been constructed in a somewhat similar manner.

All the heads of mediocanellatæ which I have seen, but one, were black. The younger the worm — and I date its age from the length of time the patient has had it — the smaller, to a certain age, is it; and the head of one only a few months old is smaller, less dark, less firm, and less definitely defined, than that of older ones. In one or two instances, when the worm was quite young, I have hesitated to say whether the object I was regarding was the head, or not, till the lens had been used. It is, however, usually easily recognized; it is as large as the head of a pin, and can be seen fifteen feet off, by the light of a tallow dip.

There would appear to be a considerable degree of misconception regarding the head of the tapeworm. Thus, regularly educated physicians have assured my patients that the head was as large as a kernel of corn; that it was about the size of a grain of wheat; that if the head I had obtained was visible to the naked eye, it was not a genuine find, for the true head was a microscopic object; and in another instance the doctors "had taken the worm away to look for the head with the microscope."

The supposition of Bemser, that the tæniæ solæ by nature drop their hooks, and thus, being incapable of retaining their hold in the intestine, are discharged, seems to me erroneous. Certainly, what we know of the tenacity with which the hookless worms retain their place, would indicate that the hooklets are unnecessary, so far as retention of position in the intestines is concerned.

Manifestations of Vitality. — In cases where the vitality of the parasite was not too much destroyed, it was quite active, and might seize, by its suckers, any surface near it. Often I have observed it fastened to the wider surface of its body; once it adhered to the side of the vessel in which I was attempting to drop it, and once it was found strongly holding to the side of the anal aperture as the patient arose from the vessel. On one occasion a rude attempt to dislodge the head when so adhering, by drawing upon the neck at some distance from the head, resulted in a laceration of the neck, the head remaining fixed to the surface of attachment. In this instance it is interesting to note that the rupture took place at the juncture of the first joint of the neck with the head. Possibly, in the plans of nature to protect the parasite, this joint is made weak that the head may survive the removal of the entire body.

A person in whose hands I once left a tapeworm floating in milk, assured me that having kept the fluid at the temperature of the hand for some time, the worm finally imbibed it, swelling up round like a whip-cord. I should add that I do not place entire confidence in this statement; certainly I have seen nothing of the sort where the milk has been kept warm for half an hour or more.

Cause. — In only one instance within my knowledge has tapeworm followed the exhibition of raw meat to infants. The late Dr. Wagner directed such food for a patient, warning the mother of the possible danger from tænia. In a few months the progottides appeared.

One case has come to my knowledge in which the direct communicability of the disease would seem to have occurred. A patient of mine visited a country house. and while there passed a large piece of worm. The couple visited had never seen a tapeworm, and when it was known to them that their guest had just been relieved of one, they were desirous of viewing the specimen. The patient therefore washed the parasite, and laid it upon the porch, whence it was presently swept into the yard. Upon the next visit of my client to the old couple, each had a tapeworm.

Symptoms. — In some, every symptom is absent, save the annoyance of passing the pieces, and the health is perfect. In others, serious symptoms assigned to the disease by writers are noticed. In a cursory manner I will state such of these as now occur to me as having fallen under my notice. The appetite may be increased; it may be lessened; perhaps more commonly it is variable, the patient eating but little for a number of days, and then feasting voraciously. Emaciation is in some cases marked, in others it is entirely wanting; headache, mental dullness, loss of memory and energy are observed. Pain in the bowels, generally, I think, referred to the right or left lumbar region, is quite common. Also, a sense as of something falling about in the abdomen — as of the gravitation of a knuckle of intestine, loaded with the worm, from one part of the abdominal cavity to a lower postion. A feeling of something crawling high up in the rectum; a sensation as of the worm coming up into the mouth, exciting nausea. A sense of engorgement of the throat, accompanied, it was claimed, by an actual enlargement of the neck, and ending in an hystero-epileptic attack. Violent grinding of the teeth during sleep. A peculiar viscid state of the saliva, especially in the early morning; the appearance of an eruption like acne about the throat and chin. In two instances the mental irritation incident to a knowledge of the worm's presence threatened the sanity of the patient.

The irritation about the anus is sometimes distressing; one patient said to me: "I have worked all day, for 17 years, taking but little pleasure, except in my books after tea. For all this time I have, especially as soon as I sat down to read, been tormented to exasperation with this symptom. It has been to me an evil which no one who has not suffered from it can estimate."

The most remarkable case of probable dependence of a "reflex action" symptom upon tapeworm that I have encountered, is the following. It will be seen that the connection of cause and effect is not direct, but perhaps as nearly so as we often find: A young man recently married came to me to report a most remarkable condition of aspermatism. He seemed perfectly well, and had not at the time, nor had he previously had, any sexual diseases or weakness. Recollecting only one case of this condition reported by VanBuren and Keyes, I was at a loss to what cause to assign the symptom, and as to what to do to relieve it. Finally, at a venture, I asked, "What is your occupation?" Answer, "A butcher." "Have you got a tapeworm?" "No; I reckon not. What is that?" Having explained to him the nature of the parasite, and the fact of the passage of segments; he continued, "Oh, yes, I've got that; I've had it a long time." I advised him to have it removed. Some months later he told me that a druggist had taken away the most of his worm, and that the old difficulty had afterward disappeared.

I have seen a number of patients who have suffered ten fold more from the medicines they have taken than from the tapeworm. The injury seems to have been done to the stomach and bowels. One patient stated that he was a year or more recovering from a large dose of turpentine, which had been taken without cure. Others complained, for more than a year after the removal of the worm, of a set of gastric symptoms, which had followed the use of a large quantity of carbolic acid as a vermifuge. Occasionally, however, symptoms so referred to the medicine are really not dependent upon any damage it has inflicted, but upon some associate diseased condition. Thus, in a case occurring in the hands of a prominent practitioner of this city, the doctor got the credit of having injured his patient by excessive medication, till an autopsy, revealing chronic atrophy of the liver, relieved him of the charge.

Patients and their physicians are too apt, when the existence of a tape worm is discovered, to refer whatever symptoms may be present to it, and occasionally disappointment results, because of the continuance of these after the removal of the worm. Thus, one of my patients had disease of the kidney in a masked form. After the riddance of the guest, the symptoms of renal disease stood out more prominently and received notice. Medical men should be cautious in expressing the opinion that the newly discovered parasite is the *fons et origo* of all the ills of their patients, and chary of promises of complete relief from them.

In one of my cases, where the head was obtained and mounted on a slide by her attending physician, symptoms of a second worm appeared in 11 months. And it is worth recording, that on or about the same day upon which this patient recognized the appearance of segments, her nephew, living with her, discovered that he also was affected.

The disease occurs, as might be presumed, in families. Thus, I have known two sisters and a brother to be afflicted with it at the same time.

Frequency. — Tapeworm, up to the last 10 or 15 years, was a rare affection — so that I have met a number of gentlemen who have practiced a quarter of a century and never treated a case. In the French army, of 250,000 men, only seven were found to be affected with it. Of late years, and according to a Southern writer, since the war, it has become greatly more common. I doubt not that there now exists one tapeworm for every 1,000 of the population of this section of the country.

Duration. — Among the patients of which I have had knowledge, in two the tapeworm had endured 17 years, in one 20 years, and in another 35 years.

Probably any number of worms may exist at once. I on one occasion knew two to pass; at another time five were extruded — they were all diminutive, apparently half-grown, and of the same size.

Diagnosis. — It has been well said that the only true diagnostic symptom of tapeworm is the passage of the joints; but the question arises: Do the segments always pass in an individual having tapeworm? For a long time I had no doubt that this question should be answered in the affirmative, but of late years I rather incline to the opinion that segments do not always pass from those afflicted with a full-grown worm. A patient of mine assured me most positively that it was only at long intervals that she found them in her discharges. The supposition that they may not appear at all times is supported by the statement of writers that they pass in greater abundance during some months than others — as in February and March, and in October and November — and also from the fact observed by Kuchenmeister, in a dead body in which a tapeworm existed, namely, while in the lower bowels no proglottides were found, on the walls of the intestines was discovered a granular matter which proved to be the ova of tænia. In fact, Kuchenmeister states that the segments may disintegrate in the bowels. I presume, therefore, that the absence of joints in the stools is not absolute proof that no worm is present.

In several instances I have known patients passing segments of tapeworm to be treated for years by distinguished practitioners for thread-worms. In these cases the prescriptions had been made from the report of the patient alone.

In two instances in my practice, great alarm has been occasioned in households, because, as the mother declared, in calling for me, "The intestines of the child were all falling out." In these cases some six or ten feet of worm, doubled several times on itself, had escaped from the bowel.

Occasionally cases occur of what might be styled pseudo-tænia, in which the subjective symptoms of the presence of the parasite are well-marked, and yet entozoa are not present. The most conspicuous case of pseudo-tapeworm I ever saw was that shown me in St. Luke's Hospital several years since, by Dr. Heydock. The patient was a young woman, sent from a neighboring State. She presented a catalogue of symptoms which might be classed as those of tænia, and these additional: She had a firm conviction that she had within a monster worm or snake; most carefully she described its location, its motions, its behavior when hungry and demanding food, and with great particularity detailed the formation and color of its head, and the manner in which it opened and shut its mouth on her tissues. The other symptom was, a violent pain as from the grip of a pincer upon the inner coats of the intestines about in the site of the gall bladder. This symptom to the bystander was presented as follows: Very often, perhaps every ten minutes, during the 24 hours, sleeping and waking, the patient, however engaged the previous moment, would clasp her hand with force against the painful spot, assume the attitude and facial expression of one agonized with pain, and scream out so as to be heard a block away. She would use no article of food unless it was literally covered with red pepper, because when so peppered the worm did not torment her, as she found it to do when food was taken without the condiment.

The second patient was a well educated and very intelligent young man. His health had been poor for years. He presented almost every symptom of worms laid down in the books, and in the most aggravated form. Judging from these, this patient, of all others, would have been supposed to labor under tænia.

I can detail three symptoms only: It was a labor and pain at times to keep his eyes open; his appetite was perfectly insatiable, and if it was not immediately appeased, distress in the epigastric region became intolerable, so that he went nowhere without a basket of food. There was a decided interference with the respiratory function, involving, apparently, the diaphram and abdominal muscles at a moment of inspiration. Let the patient be never so intently talking, every five minutes he would arise, stand with the body inclined forward, and make a rotary motion of the trunk as if endeavoring to relieve the abdomen from the sense of the clothes, at the same time, judging from the expression of the face, the entire will energy was absorbed in an effort to inspire; this act being accomplished, the sufferer would sit down and proceed with his narration, to again halt and go through with the acts described the next five minutes.

Neither of these individuals had a tapeworm. I have met several other cases where the patient was tormented with the idea of having a worm or snake in the stomach to an insane degree.

Prognosis. — It is stated by some writers that though the head may not be found after treatment a cure may yet result. This has, in several instances, occurred in my practice, but it is not generally the experience of others, so far as I can learn. The impression that in cases where all comes but the head the latter is apt to die, is probably false. I am certain that at least 100 instances have been reported to me in which "all came but the head," and the worm reappeared in due time. The fact seems to be that when the head is not found and the worm does not reappear the head has either passed unobserved or been directly killed by the dose given.

Remarks on Treatment. — The male fern in the form of ethereal extract sometimes does well. Dr. Groesbeck, who reports four successful cases with it, gives one drachm of the imported extract at 9 a. m. and one at 10.30 a. m., in a cup of milk, on an empty stomach; others have used it in this way with like success.

My experience with this remedy is not so favorable. It seemed in some cases to act quite promptly, and to expel the worm broken in many pieces, but in three such trials the worm reformed.

Some give with success large doses, four and even six ounces of pumpkin seed in emulsion. I have prescribed it several times, in these doses, with very little disturbance to the patient and with the effect of bringing the worm entire, *except the head*. For delicate persons, and for children, it is the least hurtful of remedies, and it is as efficient as some more irritant articles. As a tentative means for determining whether tapeworm exists it is the best remedy. It can be made rather pleasant to the taste and it is not irritant to the stomach. I give it in two doses, two hours apart, followed in six hours by castor oil and honey.

In conversation with physicians as well as patients I have found no remedy to be used with so much confidence as kousso. But whatever article is given, care should be taken by the physician to thoroughly advise his patient how to take the medicine, and how to antagonize sickness. Instructions should be most emphatically given to him to this effect. "It is idle for you to take this medicine without following my directions exactly. Remember, when you have an operation to use a clean chamber, and after the evacuation note if the worm be passing, if so, do not attempt to pull it out, but lie down on the floor beside the vessel till another operation occurs, or if one does not occur, take a large injection once, twice, three or four times, using, if you have it, doses of the worm medicine with the water. If the worm does not pass, send for me, letting it hang from you till I come. If circumstances render it necessary to remove the worm, draw upon it slowly and steadily. If once it is started never stop the motion; this would give the head opportunity to renew its hold; keep pulling till the very fine neck appears and then repeat the injection, and while the bowel is full of water, and if possible at the instant when its contents are discharged, draw again upon the worm, when it quite often will be washed out entire. Don't forget while you are waiting with the worm protruding to place something upon it, as the cover of the chamber, otherwise it may go back. When the worm is evacuated, make certain that no one empties the chamber before I come. Do not, out of idle curiosity, lift the worm up with a stick, or stir it, you may in this way break off and lose the head."

The better plan in the treatment of any case is to choose some day on which one expects to be comparatively at leisure, and to call often to note how the patient gets on.

It is commonly taught that it is better to give a purgative the night before the vermifuge is to be taken. I have often followed this practice, but I have discontinued it, except in cases where constipation exists. The object in giving this preliminary purgative was to empty the bowels, so that the vermifuge might come more directly in contact with the worm; and also to render the intestines more sensitive to the cathartic action of the medicine. Experience has caused me to believe that the evacuation of the bowels does not render the worm more exposed to medication. On the contrary, the fæces in the normal condition being virtually insoluble in the medicines given, do not dilute them, and by occupying space in the bowels, they actually leave less opportunity for the worm to escape the poison intended for it. Again, if the bowels be irritated over much by the preliminary purgative, the vermifuge acts so promptly, in some cases, that it seems to pass from the intestines before the worm has been exposed to it sufficiently long to secure its destruction.

When the action of the remedy is most satisfactory, the parasite comes *en masse*, in such volume as to cause the patient to be aware of something unusually large passing. Invariably the worm has been so tied into knots that I have not had the patience to disentangle it. If the result be not perfectly satisfactory, it comes out lengthwise, in the vast majority of cases the tail presenting, though in one case the head came first. When the worm thus passes in the direction of its length, it may happen that as operation follows operation, more and more will be extruded, till finally the head follows the rest. More commonly, when more or less has passed, extrusion ceases; and not unfrequently, if the worm be but moderately affected, it will re-enter the bowel. I have known many feet of it thus to re-pass the sphincter.

It sometimes occurs that in the *dernier ressort* of delivering the worm by force, when it has been advancing in a promising way, it suddenly ceases to pay out, leaving the sensation of a decided and rude obstruction; in some of these cases I am satisfied that the mass of the worm in a knotted condition has been pulled down against the sphincter, and is there arrested. It might be brought out by an injection, but that failing, I would introduce the finger, with the hope of encountering the mass, and with a purpose of turning it out, as one removes a placenta from the womb after abortion.

Sometimes, when attempting to withdraw a worm, it seems that part of the resistance is due to the clamping of the anus on the body of the parasite; in such a case, the sphincter might be distended to advantage with a suitable instrument, as a pair of bullet forceps.

When the worm is passed, if there is reason to believe that any medicine remains in the stomach — if, for instance, we have within the past two hours given a dose, and if the patient be distressed by it, as by nausea, colic, oppression of the head, etc., we should cause vomiting by simple means — as by drafts of warm water, titillation of the fauces, etc. — with the view of shortening the distress of the patient.

The detection of the head, if it be yet upon the worm, is seldom difficult. Generally it may be recognized in one minute by holding the worm in the hand after washing in clean water, and this, by tracing down the fine neck till the head is reached. Occasionally, on account of its resting in a fold of larger portions of the worm, the head has escaped observation for some minutes. It is better, where difficulty is experienced, to place the parasite on a marble slab or large dish, and proceed regularly to go from one end to the other, looking all over both surfaces of every segment, lest the head may have been detached by violence, and still remain adherent to some portion of the body. In case the worm is broken into pieces, there is no way to find the head but by straining the entire contents of the chamber through a coarse cloth. This is a most unsatisfactory plan, as there exist in the discharges numbers of objects which to a provoking degree resemble, at a glance, either the neck or head.

Dose for Children. — I had assumed that, in prescribing tapeworm remedies for children, a pro rata dose should be given, but upon reflection, I became convinced that as it was the worm for which the medicine was designed, the pro rating of the dose was not desirable, and in case the quantity of medicine given was so reduced, no curative result could be hoped for. In other words, it seemed to me apparent that however small the host, the fact that we were "doctoring" the worm and not the patient, should not be lost sight of. Experience has led me greatly to modify this opinion; for I learned that success followed smaller doses of tæniafuge, than *a priori* calculation would have indicated. I at first accounted for this fact by supposing that the intestines of the child being smaller, the medicine was applied more certainly and more directly to the entozoon. But subsequent experience has led me to adopt the apparently irrational opinion that in practice the dose should be adjusted for the patient according to weakness, age, susceptibility to cathartic action, etc. For results seem to show that if the patient be affected by the smaller dose, the worm will be removed by it.

The nervous symptoms produced by some of the remedies we use, as headache, pain in the limbs, confusion of sight, etc., seem to me to be dependent solely on intestinal irritation; for let the patient vomit a residue of the medicine and pass more by the bowel, and he will immediately find great relief.

Most all the remedies used for tapeworm, induce more or less nausea and vomiting, and indeed, in some persons, the main obstacle to the cure is their inability to retain the medicine.

By accident I discovered an admirable means of overcoming this difficulty in many cases. A very delicate lady, having taken a vermifuge became most distressingly sick at the stomach, and in consequence marked prostration ensued; as in this case the presence of the parasite was seriously impairing the health, it was particularly desirable that the medicine be retained; accordingly, having used other means, I inquired for the bay rum or cologne with which to bathe the temples, when the lady earnestly inquired if she might not use chloroform. I immediately caused her to inhale a little, and after a few inspirations, she said, "It is going away, the nausea, I mean. I can feel it sink down lower and lower into the stomach, and when I get a little more under the influence of the chloroform, it entirely disappears." The patient held the anæsthetic in her hand, and as needed by the sickness, she inhaled more or less. I have several times since used chloroform for a similar purpose, and always with success, though experience suggests that unless one is watchful, the sickness may seize the patient so suddenly that time is not allowed to effect a sufficiently decided influence of the anæsthetic. And I have reason to think that it will not succeed in all cases. One lady fell under my care by whom many remedies had been swallowed; but none had been retained more than a few minutes. Before she had taken one-half of the dose I offered her, the regurgitant action of the stomach threatened. I sat by her for three hours using chloroform against nausea, something as we do against labor pains, though giving really very little, and finally, the worm passed away.

It is the general impression among medical men, that in the act of vomiting the pylorus is closed, and that the stomach is emptied of its contents through the œsophagus alone. My experience with tapeworm remedies has demonstrated positively, that in regard at least to these medicines, this is not so; but that at each act of emesis a portion of the ingesta is thrown into the intestines. The fact upon which I base this statement is, that in some cases, where every dose was quickly vomited, the worm yet passed; and upon careful examination of the quantity of the remedy thrown off, the conclusion was reached that some was retained, while the act of vomiting was so vigorous, the medicine being sometimes ejected across the room, and so repeated, that it could not be assumed that the stomach contained any. And this idea is consistent with other facts. Thus, a patient suffering long and severely from extreme gastric irritability during pregnancy, seems for many months to eject every thing eaten; and the same may be said of some children with whooping cough; and yet vitality incompatible with the idea that all food has been rejected, remains. I doubt not that in these cases a quantity of chyme escapes into the intestine. If the position here taken be true, it has a bearing upon the treatment of certain forms of poisoning, by emesis. If this very act is liable to inject some of the poison into the bowels, the stomach pump should be preferred.

There is reason to believe that it is easier to secure an entire worm than only a short piece. Therefore, after an unsuccessful attempt, it may be better to wait till the worm has re-formed, before a second effort at treatment is made. I have, however, twice known success to follow remedies given when the remaining portion was not more than five feet in length.

ARTICLE V.

ON FRACTURE OF THE BASIO CRANII. Read to McLean County Medical Society.

Several years ago, G. L, a tinner by trade, aged 24 years, of temperate habits, healthy, strong constitution, short figure, fell through a hatchway in the third story of a building on the square, down into the cellar, a distance of about 36 feet and was carried home almost dead. The accident happened in November, about 8 o'clock in the morning, and half an hour afterward I was called to see him, and found him in deep sopor; no external irritants would produce any reflex action of the nerves or nerve center; pulse was full and slow, 50 per minute; respiration superficial and slow, 16 per minute; eyelids were closed, pupils dilated, not reacting to light; conjunctiva could be touched, but patient did not flinch. No ribs nor bones of extremities were broken. On the head I found a wound 1½ inches long, extending from linea aronata superior of left side, over protuberantia occipitalis, to linea aronata of the right, longer on the right than on the left side. Upon entering with the finger, the surface of the occipital bone was found smooth; no cracks could be felt. From the right ear blood ran out drop by drop, but not squirting. On offering him water, patient was able to swallow a little. He lay entirely motionless; occasionally he would take a deeper inspiration, followed by deeper expiration and moaning. When I visited him in the evening, he was almost in the same condition as in the morning; the only noticeable change was, that his pulse had become a little fuller and quicker, 58 per minute, and the body was warmer. Had passed water without knowing it; bowels had not acted. The second day till evening passed without change; he was apathic to everything and did not notice anything; still he swallowed liquid food, water and medicine when it was given;

blood still oozed out of the ear, but it was somewhat serous. Discharges from bowels, and urine, came away unconsciously. About 8 o'clock in the evening pulse and temperature rose, and he commenced to scream, like you hear it from insane persons, and he continued to cry in the same way for two consecutive days, with but little interruption.

On the fourth day the brain became a little more active; he could hear that questions were put to him, but the steady answer was, "I want to go out." He could not change his position; he retained the one which was given to him, and he only moved his arms occasionally. From the ear no blood ran out on the third day, but a pretty copious serous discharge, tinged with blood, had taken its place. This discharge became perfectly clear on the fourth day, and continued for fourteen days, in such quantity as to keep his pillow wet. Afterward it became more pus like, diminished in quantity, and slowly disappeared. On the fifth day, after having rested better the previous night, having had a three hours sleep, he showed some improvement. He was more quiet; on being asked if he knew me he said, "Yes, you are the doctor." But he could not remember my name. In fact, his memory was very weak, and he could not recollect the names of the most common things. He hunted, for example, with his arms for something, and when he was asked what he wanted, he said, "I want my legs," instead of "my pants." He could distinguish the difference between light and darkness, but could not see anything, and this blindness lasted till the tenth day after the accident. His recovery was very slow and gradual, his mental faculties, intellect, volition and memory were like those of an idiot; he would ask the same questions over and over, apparently without his understanding what was answered. Bodily he grew stronger, his appetite became good, he slept well, bowels were regular, he could move his arms easily, but not his legs, and when he was put upon these, they sank in powerless. I already feared that he would remain an idiot and cripple all his lifetime, when, four weeks after the accident had happened, the first ray of light fell into the darkness of his mind. Then he remembered a certain sum of money, dollars and odd cents, which he had left in his vest pocket the very morning he received the injury. From thence he continued to improve mentally and bodily, and four weeks later he was able to be up and walk a few steps, but he put his feet wide apart, to have a broader basis for the support of his body. As soon as the feet were put close together he lost the equilibrium. In the right ear hearing was imperfect; still, with the time it became good. His mental faculties became good, and after the lapse of a year, besides a dizziness when he was working on a roof, or in the sun, no sign of his dangerous sickness could be seen. The following year, the great sensibility of the brain to the heat of the sun, and the vertigo, had disappeared, and ever since he has enjoyed perfect health.

I had to deal with a case of fracture of the base of the skull, and made the diagnosis by the copious discharge of blood, followed by the long continued and copious discharge of serum, from the ear. Either alone would not warrant us to make diagnosis of fracture at the base, because there are other lesions attended by a flow of blood or serum from the ear. By keeping the following points in view, we will not be liable to make a mistake:

First. The source of blood might be a ruptured membrana tympani, or the injured mucosa lining the cavitas tympani. Both membranes are well supplied with blood vessels, but these are of small caliber, and the quantity of blood discharged from them cannot be copious, nor last long. Soon a clot will be formed, and on removing it the ruptured tympanum can be plainly seen. When we make the paracentesis membranæ tympani, only a few drops of blood escape, and this gives us the proof that the bleeding from ruptured membrane must be insignificant.

Second. More copious bleeding occurs when the anterior wall of the meatus audit. externa is broken, what happens sometimes when the condyles of the maxilla inferior are driven into it by a force striking the chin. Copious bleeding takes place, too, when the cartilaginous portion of the meatus is severed from the osseous. But in both cases the external injuries will guide us to find the proper source of bleeding.

When the base is fractured then the blood comes either from the ruptured blood-vessels of the pars petrosa, or from the vessels of the brain and dura mater. The vessels which can be injured are numerous and important, near the posterior wall of the cavitas tympani passes the sinus transversus; its lower wall is separated from the ingularis interna only by a thin lamella of bone. Over the roof goes the meningea media, and just at the upper part of tuba eustachus, lies the carotis interna. The arteries are seldom ruptured, because they are more elastic than the veins and coherent with the bones. But the veins being firmly attached to the sulcus, in which they lie, and having less elasticity, are more frequently injured, and the bleeding must be in case of fracture at the base, copious, sometimes very profuse.

If the serous discharge would be always liquor cerebro-spinalis, then its presence alone would be sufficient to prove a fracture at the base. But this is not the case. There are, it is true, very few instances recorded from trustworthy authorities, where after injury to the head a serous discharge from the ear lasted for several days, and still, when the patients died either from the injury or some time afterwards from other causes, not the least sign of ruptured dura or fractured bone could be found. The explanation of this phenomenon is difficult and no satisfactory answer has been given yet. Some thought it was produced by a hypersecretion of the mucosa in consequence of inflammation, as a case is on record, where, within 24 hours after a cold, so much liquid had gathered in the cavity of the tympanum, that the paracentesis of the membrana had to be made, a large quantity of serum escaped and the flow continued for 8 days. Others said it was perilympha. Be it what it may, such cases are extremly rare, and in the greatest majority of cases the serum oozing out from the ear after injury to the head, is liquor cerebro-spinalis, and I mentioned the above examples only to show that for making a sure diagnosis of fracture at the base, we need the two moments, copious discharge of blood from the ear followed by a long-continued and copious serous discharge. Of course the absence of these symptoms does not exclude the possibility of fracture at the base, because the membrana tympani is not always torn, and in such cases blood and serum would find their way out through mouth and nose, being discharged through eustachian tube.

Fractures at the base may be either direct or indirect, that is to say, the bone may either break at the place where the force hits or at a distance from it. Direct fractures are of rare occurence in civil practice, as the base is well protected in front by the facial bones, and at the back by the strong ligaments and thick muscles of the neck. There are in fact only two places from whence it can easily be attacked, the orbital and nasal cavities. Indirect fractures happen most frequently. The mechanism of such fractures has been a mystery for a long time and many hypotheses have been brought forward to explain it. Some thought that they were produced by irradiation, others said that coup and countercoup was the cause of them. None of these explanations covered the ground. Bruns was the first to give a satisfactory explanation by the elasticity of the skull. In order to show this elasticity he put the skull between the arms of a vise, measured its diameters with a compass, applied pressure and measured again. Then he found that while he had shortened one diameter the others had been lengthened, and on taking off pressure, all diameters had returned to their former size. If the pressure was continued beyond certain limits the bone would invariably break. But these limits were not the same in all skulls. He could compress the skull of a grown person three-fifths of an inch without breaking it, while that of a boy 12 years old broke when the diameter was shortened only one-fifth of an inch. As soon as pressure ceased the fractured bones returned to their former position. So he proved the elasticity of the skull; he proved that by the force hitting the skull the diameter is shortened in the direction of the force, while the others are lengthened; and that when the force is greater than the power of expansion of the bone then the cohesion of the particles will cease—the bone will break. This happens at a place where is the least resistance, but depends, too, on the direction and intensity of the force and the form and density of the instrument by which force is applied. The base, being considerably flat and composed of several bones differing in thickness and elasticity, with angles, cavities, channels, foramina is more liable to these indirect fractures than the other bones of the skull, which are more rounded, homogen in composition and more elastic. Besides this, the spinal column supporting the base and being firmly attached to a part of it, resists any considerable extension of the diameter downwards, and so the bones next to it break the easiest. For this reason we find generally a fracture of the os petrosum, which by its position and its brittleness is the most exposed. The fracture is almost always in the form of fissure, which commences at the porus acoust. intern. passes through labyrinth and tympanum and reaches the meatus auditor. externus. The course of the fissure gives us the reason why blood and liquor cerebrospinalis runs out from the ear. The dura lines the porus acust. intern. and the arachnoidea surrounds the nerv. facial. and acousticus and accompanies them into the meatus internus itself; both membranes must be torn, when the bone breaks and a communication is established with the sub-arachnoidal space. The liquid gets into the cavity of the tympanum either through the fissure or through the ruptured fenestra ovalis, and from thence through the ruptured membrana tympani outside. Union takes place by ossification, the same way as on other bones, only it takes longer time and the union is not so firm for several causes.

1. The voluntary or involuntary action of the muscles produces at the ends of the fractured bones a slight friction, which is the proper stimulus for an accelerated flow of blood to marrow bone and periosteum (ubi irritatio, ibi affluxus) and consquently for plastic exudation and production of callus. No such friction takes place when the bones at the base are broken. The fragments remain in the same position, firm and rigid, in which they are left after the accident has happened.

2. The tela ossea is less active because the dura is separated from the bone by the fracture and its nutrient vessels are torn. Therefore,

3. The production of callus is left almost exclusively to the tela medullaris of diploe.

The fracture as such does not need any treatment. We do not need to coapt the ends of fragments, they remain as they are left after the injury; the bleeding stops spontaneously. If it is so profuse that we are certain of the rupture of a large vessel, then patient will die soon. Some surgeons have tried trepannation in such cases and put a ligature round the meningea media; but the operation was not very successful and the patients died.

Our whole attention must be directed to the lesions which the brain invariably must suffer, to commotion, contusion and compression. When after a fall or stroke on the head the injured person becomes insensible, falls down with pale face, closed eyelids, superficial respiration, slow, small, filiform pulse, we speak of a commotion of the brain. After a while patient may take a few deep inspirations. awake, open the eyelids and get up; when trying to walk he will stagger, complains of pains in the head, feels dizzy and weak. Some time elapses yet before he will recover perfectly and resume his work. These we call light cases. In severe cases he will not move, he remains in deep coma, nothing will rouse him, no external irritants will produce the slightest reaction. Pupils may be dilated or not, but light has no influence on them, extremities are cold, pulse slow and weak. Patient may either die soon during coma, or after a few hours perhaps even days, reaction takes place, pulse beats quicker, temperature rises and even symptoms of congestion of the brain may appear. Ultimately patient may recover or other spmptoms appear which tend to show that other lesions of the brain had taken place. The deeper the coma and the longer it lasts, the less we are authorized to make the diagnosis of simple commotion. What is commotion? It was said that the vibrations of the skull were communicated to the substance of the brain, that oscillations took place and that in consequence of these a change was produced in the molecular arrangement of the brain. Such explanation is probably wrong; because it is not possible that after such a serious injury to the substance of the brain, as the derangement of molecules must be, the normal function of the brain could be re-established in so short a time as we see it in light cases.

Experiments, too. have proved that no such oscillation takes place within the brain. A glass balloon is filled with gelatine of the consistency of the brain, and then threads of dark colored silk are disseminated through it. Now if on striking the glass, waves would pass through the substance. a slight quivering of the threads could be seen. But not even with a good microscope can such movement be observed; and as the only result of the stroke, we see that the whole substance moves, when enough room is left in the balloon for the gelatine to move. Others opened the head by a trephine, inserted a needle into the brain, and attached a thin piece of paper to the head of the needle. On striking with a hammer, the brain protruded through the opening, but the paper on the needle did not move. Others filled the skull with sand; and all came to the conclusion that no oscillations take place, and that only the whole brain moves, that it moves in the direction of the stroke, that it accommodates itself to the changed diameter of the skull, and that the consequence of such accommodation is a contusion, either at the place where the force hits, or at the opposite side. Autopsies made soon after death from commotion, generally show signs of contusion, destruction of brain substance, or capillary apoplexies; and several eminent surgeons were by these post mortem examinations led to deny the existence of commotion, and believed that death was produced either by contusion, or that, when no signs of contusion could be found, some lesion in other organs had taken place, which had escaped the attention of the examiner. But there is not any doubt that most careful examinations have been made, where no anatomical lesion could be found, or where the signs of contusion were slight and in comparatively unimportant portions of the brain, that the question arose: What did the patient die of? Certainly not of the slight contusion; less so, as we know that by rifle balls sometimes considerable portions of the brain are destroyed without lethal effect. On looking at the symptoms, we see that intellect, action of the heart and respiration, motility and sensibility of the patient is altered, that all functions of the brain are disturbed. Such a general disturbance of the functions can only be produced by a disturbance of the circulation of the blood and what follows it, and incompetent nutrition. When after being struck with a hammer the head of an animal is opened, the brain looks pale and does not move, and only when the animal rallies the vessels fill up again. The same phenomenon can be seen in the eye, when the pupils are well dilated by atropine; the vessels of retina are plainly visible, as soon as you strike the animal on the head, they become either invisible or can only faintly be distinguished, till the animal has rallied. We see, therefore, that when the head is struck an anæmia of the brain takes place followed very likely by a venous stasis and certainly by an improper nutrition of the brain. This explains in the most simple manner the functional derangements, which characterize the symptoms of commotion, and gives us the reason why slight cases recover so soon, but why still some time has to pass before they rally. We are still at a loss to know the exact cause of this trouble in the circulation; very likely it is produced by a reflex paralysis of the vaso-motor nerves. The tonus of the walls gets lost, arteries do not contract, insufficient supply of oxygen stops function of brain, vagus makes heart action slow and weak, blood goes into the veins but slow, and as they lose their tonus a stasis is produced. According to the above explanations, we are, therefore, led to the belief that commotio cerebri belongs to the symptoms of shock, and that the paralysis either exists in the blood-vessels of the brain alone, or a general paralysis of the vessels ensues.

In our case during the first two days the most prominent symptoms were those of commotion, loss of intellect and sensibility, inability to move, weak and slow action of the heart. After this the circulation through the brain was partially re-established, which was shown by the increased temperature and quicker movement of the heart. I say partially established, because there was still absence of intellect and vision and the legs remained paralyzed, showing that still an impediment existed for the proper nutrition of the brain, and this was caused by a clot of extravasated blood, or, to use the technic term, by compression. I am afraid I have imposed upon your time and patience already too long, and abstain from going into a detailed discussion of compression. I content myself to say, that it represents an impediment to circulation and nutrition, and that when compression is sudden and the substance, producing pressure, large, then the clinical symptoms are almost identical with those of commotion, and when compression is so great as to stop nutrition, death will always occur. If compression comes on gradually, then the brain will accommodate itself to the defect, nutrition and only symptoms of local pressure will appear. In our case the extravasation of blood took place very likely immediately after the fall, but pressure did not get to a high pitch because the fracture served as a safety-valve through which blood and afterwards liquor cerebro-spinalis could escape, and when commotion seemed to have passed, only symptoms of local pressure, loss of intellect and vision and paralysis of the legs remained. With the resorption of the clot, the brain resumed gradually its normal function. I said the fracture acted as a safety-valve, but it is the road, too, through which the bacteria enter the interior of the skull and produce inflammation and suppuration of the meningea.

Our therapeutical action must be directed to the following points:

1. We must counteract the shock and avoid everything, that depresses the heart's action. We put, therefore, patient to bed, cover him well with blankets, put warming pans to his feet and hot cloths to abdomen. If patient can swallow, we give him stimulants, with caution.

2. We must try to give tonus to the paralyzed vessels, and avoid, when reaction takes place, congestion. Ice bags to the head are the best remedy. As adjuvants, two remedies may be given, which are known to contract the vessels, bromide of potash and ergot.

3. We must promote resorption. For this purpose we stimulate the organs of secretion and excretion, salivary glands, skin, kidneys and intestines.

The following is the course of treatment I pursued: During the first day I kept the body warm, applied ice bags to the head, and gave occasionally whisky with water. Towards evening when pulse became a little quicker, I stopped the whisky and gave bromide of potash and calomel with jalap, alternately every two hours till I had produced ptyalism and profuse evacuations. Then I quit giving calomel, continued with jalap alone, but not so often as before and combined the bromide with acetate of potash, giving it every four hours. On the fourth evening, when there was more activity of the brain, I gave 10 grains of Dover's powder to allay the restlessness. The next morning I had patient sponged off with tepid water, and from thence up to the time of his recovery he received two spongings daily. The temperature of the water was diminished gradually till it was ice cold; after being sponged patient was well rubbed. Ice bags, bromide and acetate of potash were used till the function of the brain was normal. Dover's powder and jalap were given when necessary. Diet was regulated according to his necessities. To avoid, if possible, septic poisoning, the ear was washed out every day with weak solution of carbolic acid (1.100) and clothes wet with the solution kept on it, and changed as often as soaked with serum. The legs improved under the use of the cold water spongings and liniments, which I had applied three times daily. Very likely it was the massage that helped them most. When patient was able to be about, I forbade him strictly to read, and enjoined him to keep away from everything that could excite him. For two months more he took the elixir of pyrophosph. of iron and bark as a tonic.

DIFFERENTIATION OF CANCER OF STOMACH FROM DYSPEPSIA BY THE ABDOMINAL TEMPERATURE. (*La France Médicale, July* 9, 1879).

At the Societé Clinique, Paris, communicated some interesting facts relative to local morbid temperatures in certain affections of the abdomen. A patient presented marked symptoms of dyspepsia, with progressive wasting away. The general appearance favored the supposition of cancer of the stomach, but there was no vomiting, no tumor in the epigastric region. The epigastric temperature was carefully taken, and the average (we suppose) was 37.3°, while the temperature in the axilla did not exceed 36.8°.

The patient died and an autopsy revealed cancer of the posterior wall of the stomach, extending to the large curve. The orifices were not invaded.

The normal temperature of the epigastric region is given as 35.5°, and the statement made that in simple dyspepsia elevation of temperature does not occur.

Clinical Reports.

ARTICLE VI.

COOK COUNTY HOSPITAL.

(Reported by J. H. SALISBURY.)

A Case of Rupture of the Diaphragm and Stomach.

A male patient was admitted to Cook County Hospital on the evening of July 22d.

The following was his history previous to admission: While intoxicated, he had been seen to stagger against a lamp-post, and afterward fall off the sidewalk into the gutter, where his left side struck upon the covering of a man-hole.

On admission patient was in great distress, and complained of severe pain in the left side. He vomited several times soon after admission. The matters vomited were dark, looking like coffee-grounds, and evidently contained blood.

On examination, a soft swelling was found in the left hypochondriac region. About the center of this swelling was found an abrasion of the skin about 2 Cm. in length by 1 Cm. in breadth. Around this was a circular red line, enclosing a space about 4 Cm. in diameter. Between the abrasion and this red line the skin appeared natural, although the tissues beneath were swollen. Crepitus was felt, and the finger passed in further than natural, as if the ribs had been crushed in at this point. The patient did not appear to be greatly prostrated, but was very restless, and called constantly for water.

The treatment consisted of morphia to relieve pain, and stimulants. Warm fomentations were applied to the side.

July 23d. — His pulse was 120; his temperature 38°. The vomiting of blood had ceased. He was very restless, although he had slept some. There was no tenderness of the abdomen or chest, except in the immediate vicinity of the injury.

July 24th. — He was still quite restless. Pulse, 120 ; temperature, 37.9°. He had great dyspnœa and cyanosis. He coughed a short, hacking cough, and expectorated a little frothy mucus. Large mucus râles were heard over the whole right lung : metallic tinkling, in the mammary region of the left side. The breathing over the upper part of left lung was good — over the lower part it was indistinct. The percussion resonance was good. There was no tympanitic resonance.

10 a.m. — He was very restless. His sputum was tinged with blood.

4 p.m. — Some tympanitic resonance could be found in left hypochondriac region. Patient seemed a little more comfortable.

7 p.m. — Pulse 100, very feeble ; temperature, 37.9°. He died during the night.

The autopsy was made twelve hours after death. The eighth, ninth and tenth ribs were found to be broken. A rupture of the diaphragm was found about 10 Cm. in length, situated behind and to the left of the central tendon. Through this rupture the stomach had been forced into the pleural cavity, so that nearly all of the organ lay in the pleural cavity. A rupture of the stomach was found at the point situated uppermost as the organ lay in the pleural sac. The rent in the stomach would easily admit the passage of two fingers. The contents of the stomach and some blood were effused into the pleural cavity. There was no effusion of the contents of the stomach into the peritoneal cavity. There was no inflammation of the peritoneum nor of the pleura.

NOTES FROM PRIVATE PRACTICE.

ARTICLE VII.

A Case.

On the morning of April 7, 1878, I was called to meet in consultation my friend, Dr. I. H. Gillum, in a case in whose subsequent clinical history we became very much interested, not so much because of anything specially *new* in the symptoms, as from the difficulty in arriving at a clear and satisfactory diagnosis.

The patient was a married lady, the wife of a farmer, about sixty-five years of age, of a phlegmatic temperament, spare habit, and was free from any hereditary vice.

The doctor informed me that she had been complaining about a month with pain in the left ear; that while he was not entirely satisfied as to the nature of the trouble, he had been disposed to regard it as an obstinate form of neuralgia, and had treated it accordingly; latterly, however, he had feared abscess somewhere among the cranial bones.

A careful examination of the case revealed no apparent lesion anywhere. The tongue was but slightly furred, the appetite was fair, there was no febrile excitement, nor had there been at any time previous. There was no acceleration of the pulse, no disturbance of the circulation, nor was there in the region of pain, a particle of swelling or soreness. An examination through the speculum of the external meatus gave no sign of disease, the walls of that canal, together with the membrana tympani, presenting, apparently, a normal appearance. The mouth and pharynx were also examined with like results. The pain in the ear was deeply seated, of a dull, grinding character, was persistent, and generally more severe at night than through the day. It might also be proper to state that the patient complained of a slight irritation and weakness of the left eye, and numbness of the muscles of the corresponding side of the face.

Considering the fact that there seemed to be a total absence of all inflammatory excitement, and that the ordinary symptoms of abscess were not well marked, I was inclined to concur with the doctor in his diagnosis of the case; that is, that the affection probably belonged to the neuroses, and therefore was purely functional. While, up to this time, the case had received such treatment, both constitutional and local, as seemed indicated, it was decided that essentially the same line of therapeutic measures should be continued, for awhile at least.

During the following three or four weeks the anti-neuralgic treatment was kept up vigorously and persistently. Quinine was given to cinchonism; strychnia, iron, arsenious acid, aconite, belladonna and opium were all employed, either in combination or separately; vesication with iodine and blistering cerate behind and in front of the ear, was had recourse to without stint; but all without the least beneficial effect to the patient, save to afford, now and then, a little temporary relief from pain. It was now two months since the inception of her illness, and there had quite recently developed some new features in the case.

These were of such a character as to force the abandonment of the functional theory. A fullness was observed just in front of, and below, the left ear; indeed the swelling seemed to follow up and embrace the entire paroted gland. There was also a partial closure of the auditory meatus. A copious and profuse salivation with a feeling of fullness of the left side of the face, and a burning, smarting pain of the mouth of the corresponding side, were prominent symptoms. The mucous membrane of the mouth and pharynx of the affected side was irritable and highly congested, without, however, any abrasion of its surface. At the upper part of the pharynx, at its junction with the soft palate, a little to the left of the median line, was noticed a rounded or globular enlargement, which was firm and unyielding to the touch, and almost entirely devoid of sensibility.

The patient was evidently wearing; the appetite had become seriously impaired, and the loss of flesh and strength was marked and decided. During the next two months, while there was observed no new feature in the case, there was certainly an aggravation of all the symptoms enumerated, with a steady and rapid decline in the general health.

The paroted gland continued to enlarge, was comparatively painless, and as hard almost as bone. The growth at the upper margin of the pharynx increased in size, so much so, indeed, that we could not well divest ourselves of the belief that within this tumor, or in its immediate vicinity, there must be a collection of pus. With the view of confirming or otherwise setting at rest this question, we repeatedly, from time to time, carefully examined it with an exploring needle; also passed to its entire depth a fine-pointed, narrow-bladed bistoury, but always with negative results.

The saliva still continued to pour from the mouth in incredible quantity, was pungent and acrid, burning and smarting the mucous surfaces, and gave off a very offensive, nauseous odor. The left eye was inflamed and painful, with vision almost totally obscured ; the auditory meatus, from which exuded a thin, serum-like fluid, was gradually closing, and the functions of the ear were very nearly destroyed. On carefully examining the meatus with a probe, it was passed without difficulty, not only to the bottom of this canal, but through the membrana tympani into the middle ear, thence through this cavity and beyond, apparently, along the entire track of the eustachian tube.

The *numbness* of the left cheek, already alluded to, had developed into almost complete anæsthesia, and this loss of sensibility was not confined to the facial muscles, but embraced, so far as observed, all of the muscles supplied by the fifth nerve, as these could be pinched or pricked without giving rise to the least sensation. At this time, the sixteenth week of her illness, the patient became suddenly unconscious. The loss of consciousness was soon followed by slow and stertorous breathing and coma, more or less profound. In short, the attack was purely apoplectic in its nature, accompanied by a train of symptomatic phenomena such as always follow compression of the cerebral substance.

This condition lasted five or six hours, when there was a gradual return to consciousness ; but it was found that the whole of the *left* side had become hemiplegic ; there was total blindness of the left eye, the sense of hearing in the left ear was completely abolished, and the facial muscles of the affected side were so drawn to the opposite side as to give to the physiognomy a most unnatural and hideous expression.

The paralysis, so far as motility was concerned, seemed complete, and continued until the close of life. The condition of the patient was now indeed pitiable ; the paralysis of the muscles concerned in deglutition rendered alimentation by the mouth imperfect and difficult. The integument was corrugated and shriveled, and, in color, not unlike that of the cadaver ; the emaciation, which had been marked for two months, had, it appeared, reached the utmost limit, and to add still more to the distressing features of the case, bed sores were rapidly forming over the iliac projections, the great trochanters, and indeed on almost every part of the body subjected to pressure.

The patient continued to fail rapidly, and died from exhaustion four weeks from the time of the apoplectic seizure, and about five months from the first symptoms of illness. Death was peaceful and quiet, wholly free from convulsions of any character.

From the above history of this case, though briefly and imperfectly given, enough has, I trust, been said, to make it evident that whatever may have been the nature of the lesion, and wherever may have been its primary seat, sooner or later it became intra-cranial, involving the cerebral structure in such a way, and to such an extent as to greatly hasten the fatal issue, and render death inevitable.

What was the matter, and where was the starting point of the disease? Was it primarily an abscess of the mastoid cells, or was it scirrhus, affecting some one or more of the cranial bones? If neither of these, then what was it?

Again, observe that the paralysis occurred on the *left* or diseased side. How are we to reconcile this fact with the accepted theory that hemiplegia, when it takes place, is always the result of cerebral lesion affecting the *opposite* side to the one paralyzed?

ANNAPOLIS, IND. J. A. GOLDSBERRY, M.D.

ARTICLE VIII.

Case of Complete Procidentia Uteri Successfully Treated by Operation.

The following case may serve to illustrate the power of the the gynæcologist in restoring to a new life, as it were (by a comparatively simple operation), one who had suffered for more than three years, and whose happiness had nearly vanished because of the apparent hopelessness of her condition.

Mrs. C., æt. 42, came under my notice Aug. 30th, 1878. She is rather an intelligent lady; married twenty-three years (one husband), and had given birth to two children.

In answer to a summons, I found her in great pain, and upon examination as to the cause, discovered a tumor as large as my fist external to the labia. It was soft and fluctuating. Upon attempting to reduce it, my fingers encountered a hard body within the pouch, which proved to be the uterus. Upon attempting to pass the catheter, with the meatus urinarius external to the vulva, the instrument met with resistance, the canal being doubled upon itself; a small quantity of urine was drawn, thus proving the existence of vagino-cystocele. A finger introduced into the rectum passed down into the prolapsed pouch, thus proving vagino-rectocele. When the parts were in a state of prolapse — for I found the case one of long standing — of course the bladder and rectum were unable to discharge their contents, hence, retention of urine and constipation of the bowels were almost constant complaints. Whenever the patient desired to empty the rectum or bladder, the tumor had to be reduced. After the birth of her second child — for a period of three and a half months — her knees were involuntarily apart, during which time there was evidently a prolapsed state of the uterus, rectum and bladder. In the normal state, the uterus, together with some convolutions of the small intestines, are mainly kept *in situ* by support from the vagina. When the bladder is distended, it is kept from retroverting by resistance from the vaginal walls, while the same cause operates to prevent the anterior wall of the rectum from falling forward. When, however, the vaginal walls are impaired by disease or otherwise — as from enlargement of the uterus, vaginitis, etc. — the resistance is no longer sufficient to render proper support to the adjacent parts, in consequence of which the vagina falls upon itself, and we have what is known as "prolapsus vagina." It is a mooted question whether prolapsus of the uterus occasions prolapsus of the vagina. Dr. Barnes, in his "Diseases of Women," late edition, is of opinion that "prolapsus of the vagina may exist independently," and further states, that "there is a preparation in St. George's Museum, which seems to show that vaginal rectocele may exist without prolapse of the uterus." Dr. Savage ("Female Pelvic Organs") says: "Prolapse of the vagina alone, or prolapse of the vaginal mucous membrane alone, are two affections which, anatomically considered, would seem impossible." Dr. Thomas, in his "Diseases of Women," states that: "Noel mentions a case of this kind where the prolapse reached down to the knees." Dr. Thomas further remarks: "It is an important question whether there can be prolapse of the vagina without vagino-rectocele, vagino-cystocele, vaginal hernia of intestine forcing down the vaginal *cul-de-sac* or uterine prolapse." In the case of Mrs. C., I think all of the conditions mentioned by Dr. Thomas existed. Through a correspondence with a physician of Iowa, who formerly had charge of her case, I learned that her prolapsed state was greatly aggravated, if not entirely induced, by the insatiable lust of her husband, whose bestial approaches, when heightened by liquor, were as frequent as four or five times in a single night. This gentleman operated upon her twice, each operation proving a failure owing to the venereal appetite of her husband, who, Satyr-like, in the language of the doctor, "tore things all loose." From the very pointed language that the doctor employs in describing Mrs. C.'s case, one would naturally suppose that the sole trouble originated in the unnatural size of her husband's penis, and his amorous propensity for using it. Frequently it was necessary to inject morphine subcutaneously for relief of pain occasioned by excessive coitus.

The uterus seemed to be about twice its normal size, and within it there appeared to be an apparently hard, resisting body, while every five or six weeks there was a free discharge of muco-purulent matter, from which conditions I inferred there might possibly exist a fibroid. The error of this belief was made apparent at the time of an operation subsequently performed by Dr. Jackson, when upon careful examination under ether, no such growth was found.

The woman having separated from her husband, applied for admission, and was received into the Woman's Hospital, State of Illinois, Dr. A. Reeves Jackson in charge. In January, 1879, Dr. Jackson operated for narrowing the vagina, at which I was present. The patient was anæsthetized, placed in the lithotomy position, and the operation conducted under the Lister spray. The operator commenced by picking up a fold of the posterior and upper vaginal wall above the os uteri, and with a pair of scissors cutting out a circular portion 3.7 Cm. in diameter, introducing a running suture around the margin of the cut surface — a sort of puckering string — drawing the suture together at the ends and tying. The operation was skilfully and expeditiously performed.

The patient made good recovery, but the cure being incomplete, Dr. Jackson performed a second operation a few weeks later — the last operation being similar to the first, save that the lower and posterior portion of the vagina was acted upon.

The woman called upon me not long since; I examined her and found that the operation had completely cured her.

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ARTICLE IX.

A Remarkable Case of Opium Poisoning.

The following case offers several points of interest:

Mrs. M. E. K., æt. 27 years, married five and a half years; of small size, but well nourished.

Antecedents. — She has had two children at full term; miscarried twice. Her first pregnancy was a good one; she enjoyed good health throughout, and gave birth to a healthy girl, which died last year of yellow fever at an age of 3 years and 2 months. The second pregnancy was not so easy; she had convulsions (puerperal) towards the end of the sixth month, from which she recovered, and gave birth to a girl at full term. During her entire second pregnancy she was in ill-health, had little appetite and was very anæmic. The two miscarriages took place, one before she became pregnant with her second child (which is now living, and a fine, healthy girl), and the other thereafter.

At present she is in the ninth month of another pregnancy. Since the fourth month of her present pregnancy she has suffered with false pains, which recurred regularly towards the beginning of each subsequent month, but which, under good care and judicious sedative treatment, left her after an illness of about two days each time. She had at times slight suppression of urine, with traces of albumen.

These attacks seemed to increase in violence each time, and on the first of June, 5 p. m., she had a puerperal convulsion. I put her at once under chloroform, and administered a solution of hydrate of chloral, 2.0. Batley's sedative gtts. xv. in water, 15.0, per rectum, which dose was repeated two hours later. At the same time I applied powerful rubefacients along the spine. and especially over the region of the kidneys. She commenced to pass urine freely and copiously, and no convulsion has as yet returned.

Her last attack occurred on July 3d at 9 p. m. I applied rubefacients to the spine as before, and gave, by rectum, a dose of chloral and Batley's sedative as mentioned above, which was repeated at 12 o'clock the same night and at 7 and 8:30 the next morning.

She slept a little during the night, and in the morning from 8:30 till 12:45 p. m. (four hours and fifteen minutes). The last sleep was very refreshing. She drank a little iced wine. but ate nothing.

In the evening, at 6 o'clock, she partook an ordinary wineglassful of ice-cream. Half an hour later she was taken with retching, and ejected about two teaspoonfuls of what appeared to be curdled milk. The pains, which had left her completely that morning, commenced again, steadily increasing in violence.

At 7 p. m. I administered morph. sulph. 0.01, subcutaneously in the *left* arm, which, not having given the slightest relief after twenty minutes. was followed by hydrate chloral 1.25, Batley's sedative 0.6, and water 10.0, per rectum. No effect was noticed until twenty minutes after the last dose (*i.e.*, forty minutes after the administration of the morphine in the left arm), when all at once the lady's face became hot and flushed, the breathing very slow (but not stertorous), the pulse quick and small and *both* pupils contracted to the size of a pin's head. Respiration, 10; pulse, 120. Rate of pulse to respiration: 12 : 1.

I became at once aware of the fact that I had a case of opium (and chloral) poisoning on hand.

I rubbed the patient's face, neck and spine with ice, and prescribed an ointment composed of extr. belladonnæ 3.75, cerati camphoræ 15.0. I did not want to use atropinum hypodermically, fearing that I might run into the opposite extreme; but wished to secure a very slow and gradual absorption of the belladonna.

Of this ointment I applied about 4.0 to the back, on *both sides* of the spine, every twenty minutes, closely watching its effect on the pupils.

To my great astonishment and surprise, ten minutes after the second application, the *right* pupil dilated rapidly, and was expanded to its utmost in a remarkably short time (eight minutes later), while the *left pupil remained contracted as it was before the application of the belladonna, viz., to the size of a pin's head.* I desisted from the further application of the belladonna; the ice was continued.

Three hours and twenty minutes after the commencement of the opium narcosis (11 p. m.) the lady was so far resuscitated as to be able to answer questions rationally, she complained of headache, drowsiness and dimness of sight. The pupils remained as described, viz., the right dilated to its utmost degree, the left contracted to the size of a pin's head, until half-past three in the morning, so that by 4:30 they were of normal size, and responded to the light again.

The fœtal movements were not felt until about 11 o'clock a. m., July 5th, and at night they became as strong as ever they were before.

The noteworthy points in this case are:

1. A comparatively small dose had produced poisoning. The interval between the last dose in the morning and the first dose at night was 11 hours.

2. Why did the right pupil show the effect of the belladonna, while the left one remained contracted, and this without the slightest alteration for about 6½ hours? The morphine solution (10 minims of a solution containing morph. sulph. 0.06 in 60 minims of water) was injected into the left arm, the belladonna ointment was applied equally over and to both sides of the spine. What was the cause of the persistent difference between the two pupils, since the drugs act constitutionally?

3. Not the slightest harm has so far resulted to the fœtus.

GUSTAV KEITZ, M.D.,
666 North Rampart Street.

NEW ORLEANS, LA.,
July 9th, 1879.

ARTICLE X.

Hernia Reduced by Elastic Bandage.

For the June No., 1878, of the JOURNAL AND EXAMINER, I remember abstracting from *L'Année Médicale* a summary of two cases of intractible hernia reduced by means of Esmarch's bandage. As will be seen by reference to the above abstract, taxis and position and chloroform had all been faithfully tried by competent men to no purpose; whilst the hernia was reduced readily by the constant pressure of the elastic bandage.

Since the above was published, I have spoken with several physicians on the subject, but none of them had ever used the bandage or seen it used for this purpose; and Dr. F. H. Hamilton, in his extensive article on the question of hernia in the *Hospital Gazette*, June 7, 1879, does not mention the use of the rubber bandage, notwithstanding the fact that its successful application forms the most convincing argument towards the establishment of the theory which he has labored to establish.

Whilst visiting Geneva Lake, Wisconsin, last week, I became acquainted with Dr. Geo E. Catlin, who had just then under his care a case of right femoral hernia, which had existed for three days. Dr. C. had diligently used taxis and position and the administration of morphia, but without result, when he invited me to see the case with him.

The patient, a woman of forty-four years, had been previously troubled with the hernia, but the reduction had been effected with ease. On one occasion, when it seemed more obstinate than usual the reduction was effected by a dose of morphia and the elevation of the hips. She was at the time troubled with other afflictions, which appeared to have no connection with the hernia. The tumor in question was hard and about the size of a hen's egg. Considerable nausea was present, but no vomiting.

Anxious to try taxis still more effectively, we lowered the patient's head, elevated her hips with pillows and cushions, and one of us patiently drew the bowels towards the epigastric region, while the other manipulated the hernia. These efforts were as unsuccessful as the previous ones. Chloroform was then administered, and the efforts renewed without effect. I then asked Dr. C. to allow me to apply the rubber bandage, which I suggested he should bring with him. The bandage was applied and we left the patient with the hips elevated to return in the course of two hours. Finding himself detained by a case of labor, Dr. C. requested me to drive up and see the patient. The hernia was not reduced, but I also observed that the bandage was not applied as snugly as desirable — it was really too wide. I took it off and re-applied it, and had the satisfaction, in a quarter of an hour, of hearing an exclamation, Oh! from the patient, which was but the expression of pain which the hernia produced in returning to its place.

The bandage used was three inches wide, probably one two inches would have been more convenient. It was first laid over the crest of the ilium on the affected side, brought over the hypogastric region and round the back and overlapping the end brought down the groin straight over the tumor; it was then brought round the back of the thigh, and once more passed round the body to be brought again over the hernia and firmly secured.

It is certainly not necessary to advocate at any length the application of force so gentle, equable and constant, in preference to the rude, uneven and inconstant pressure which the most practiced hand can apply. The probability is that instead of being a last resort, after several failures, it will become the first measure adopted, and find a place in our regular text-books.

CHICAGO. R. TILLEY, M.D.

ARTICLE XI.

Poisoning by Strychnine — Prompt Recovery after Administration of Potassi.´Bromid.

On the evening of July 7th, 1879, I was hastily summoned to a livery office, where the young man in charge, aged about twenty, was affected with very severe convulsions. I could elicit nothing further than the answer "No" to all questions, and the surroundings gave no clue to the mystery. I lost no time in giving an heroic emetic, with orders to those in attendance to hurriedly get some milk and warm water, while I returned to my office — a distance of one block — for medicine. While gone, his employer succeeded in ascertaining that strychnine had been taken. I at once gave milk and 4 grams of the bromide of potassium, waiting sufficiently long for the effects of the emetic, with no results. Of the bromide, gave from 15 to 30 grams within one hour, during the last half of which the rigidity became less and less marked, and was soon followed by vomiting and nearly complete relaxation.

With occasional muscular twitchings, the patient fell asleep, and awoke to recovery without an unfavorable symptom, resuming his work again on the 9th.

Since his recovery he has stated that the day before his illness he purchased five cents worth of strychnine, the whole of which was taken, making a piece, as he says, about the size of a pea. This was taken about six o'clock in the evening of the 7th, and was soon followed by muscular twitching, which continued. When found, he was in a continuous and persistent spasm from head to foot, with an alarming opisthotonos, and extremities cold to body. For awhile it was difficult to administer medicine, but, keeping the jaws apart by the introduction of a fan-handle, small amounts were constantly introduced. The point of special interest to me is the promptness with which the patient was relieved by the rather heroic use of bromide of potassium.

W. H. SMITH, M.D.

SHELL ROCK, IOWA, July 11th, 1879.

A LIVELY CITY. — The editor of the *Louisville Medical News* says they have in that city, now, five medical journals, and four medical colleges, and intimates that there are yet from ten to twenty members of the profession who are still without professorships. It is evident that there is both room and material for one more medical school in Louisville.

Society Reports.

ARTICLE XII.

CHICAGO MEDICAL SOCIETY. (Reported by R. Park, M.D.) Regular meeting July 7th. Dr. E. L. Holmes, chairman *pro tem.*

Dr. A. R. Jackson read a paper on "Lacerations of the Cervix Uteri," which will be found in the last number of the JOURNAL.

In the discussion which followed, DR. DUDLEY said he wished to correct any impression that Dr. Gardner was entitled to claim priority of discovery of all that Dr. Emmet had called attention to. The former had recognized the fact that laceration existed in many of these cases, but had not noticed, or at least had not laid any stress on the fact, that by a proper approximation of the edges of the rent the parts were reduced to their proper position, and much of the enlargement disappeared.

DR. FITCH wanted to be understood as recognizing the frequent occurrence of the lesion, and its importance as a factor in much of the suffering which women have to bear; but he thought, after all, that it was not the extent of the laceration, be it slight or great, that should determine the advisability of Emmet's operation, but the effect of the lesion upon the patient, judging from the consequent pain, lassitude, sterility, etc., of which she might complain. He had seen cases where extensive laceration had taken place, while the patient suffered very little, and he doubted if the surgeon should, in such a case, operate. That trachelorrhaphy does not prevent laceration again in subsequent labor, he learned by experience in two cases. With the essayist, he insisted on the necessity for careful preparatory treatment;

but he feared that weekly puncture for purposes of depletion would lead to a cicatricial contraction, which would complicate the results of an operation. He did not believe there was any need to resort to anæsthesia during the operation, nor to the use of the catheter during the few days after it; but looked forward to the time when we should operate in our offices and then send our patients about their various duties.

DR. TILLEY enquired whether there was no prophylaxis during and subsequent to labor which should be insisted upon.

DR. INGALS was surprised that in examinations the unaided finger and the bivalve or round speculum should reveal so little, while the Sim's speculum or a perineal retractor revealed so much.

DR. BARTLETT related a case of Dr. Mary Thompson's. A woman suffering from cervical laceration became the subject of epileptic seizures, and finally had in one day six or eight of these attacks. The doctor operated in the usual way, and the patient had now had but one fit in three months. Dr. Bartlett also referred to a paper which he had read before the Society of Physicians and Surgeons, "On the Anatomy of the Cervix Uteri, Before, During and After Labor," and called attention to the facts therein pointed out as having a new interest in connection with the subject under discussion. Stolby, Cazeaux, and the majority of more recent writers, state that up to a few weeks before confinement the cervix remains entirely undeveloped, and that the last joint of a finger inserted along the cavity of the neck may reach the os internum; that during the progress of labor the ring of the cervix is obliterated, so that the uterus and vagina form a continuous canal; and that after labor the strongly "pursed" orifice through which the fingers pass in entering the cavity of the womb is the os externum.

In the paper referred to, Dr. Bartlett had stated that before labor the cervix had greatly expanded, so that even that portion of it below the vaginal attachment measured several inches in width, that the contracted portion really felt by Cazeaux *below* the vaginal attachment, and yet located in his imagination — by a singular perversion of conception — *above* it, was not, as he supposed, the os internum, but that segment of the cervix which, at the time of examination, was the line of demarcation between the expanded and the yet unexpanded portion of the neck. That the infra-vaginal portion of the cervix is not "obliterated" at the time of the passage of the child, but remains as a narrow band jutting into the parturient canal. And finally, he had stated that after labor the firmly contracted orifice generally alluded to as the os, is the os internum, while the infra-vaginal portion of the cervix floats in the vagina as a flabby ring.

It was, therefore, the fact of the existence of this ring which he wished to introduce in this connection. For while no one is able to conceive of those conditions which are now recognized as cervical lacerations as being the outcome of the slight, superficial, purse-mouth flutings which may be sometimes felt in the margin of the os after labor, yet, given an actual, substantial, fleshy ring, through which is to be propelled a fœtus, it is easy to conceive of the cause, the time, the anatomy, the means of diagnosis, and even the plan of treatment of those injuries of the uterine neck which are just now of such paramount interest to the gynæcologist.

DR. WICKERSHAM thought that the general practitioner should learn, from the paper and its discussion, that in all cases of parturition he should avoid meddlesome midwifery.

In closing the discussion, DR. JACKSON said he thought Dr. Fitch's suggestions with regard to the feasibility of operating were admirable. He also allowed that "meddlesome midwifery" might be and was the frequent cause of much future trouble, as well in the direction of the subject of his paper as in other ways. He would insist on the general rule that every accoucheur should examine his patients four to six weeks after confinement, in order to detect laceration of the cervix uteri as of the perineum.

After this discussion had ceased, DR. C. FENGER gave an elaborate demonstration of the pathology of embolism, illustrating his remarks by crayon sketches, morbid specimens and sections under the microscope. He divided emboli into innocent and noxious, and classified their ultimate effects thus: I, None; the resulting ischæmia being compensated for by collateral circulation. II, Gangrene; which usually took place only in the extremities. III, Hæmorrhage; for the most part occurring in parenchymatous organs. IV, Abscess; *e. g.*, pyæmic abscesses. Innocent emboli might cause II and III, but never IV; noxious emboli, III and IV. He described the process of fatty degeneration of embolic infarctions and the formation of abscess from the same.

Specimens were exhibited from two cases: one of embolism and abscess of the liver; the other of septic endocarditis with infarctions in the brain, spleen, liver and kidneys.

CORRECTION.

In our report of the meeting of the Chicago Medical Society, in the last number of the JOURNAL AND EXAMINER, we inadvertently did Dr. E. L. Holmes an injustice, for which we hasten to make reparation. In the discussion on chloroform asphyxia, he is represented as stating that he had been so unfortunate as to have seen seven or eight deaths on the table from its use. It should have read *apparent* deaths — *i. e.*, most alarming symptoms: syncope, etc.; but the Doctor has never had a *fatal* case of chloroform poisoning. He mentioned also that evening that he had had *one* fatal result from the administration of ether, in 1876; which was duly reported in the files of the *Chicago Medical Journal.*

He also alluded further to the method of resuscitation by depressing the head or elevating the feet — a method which was original with him, and which he was the first in this country to apply, although the distinguished Nelaton also resorted to it, and is probably entitled to the honor of priority in its employment.

We trust that this correction may meet the eye of every one who may have received a wrong impression from the report alluded to.

ARTICLE XIII.

MICHIGAN STATE BOARD OF HEALTH.

The quarterly meeting of the State Board of Health was held in the office of the secretary in the new capitol at Lansing, Tuesday, July 8, 1879. The following members were present: R. C. Kedzie, M.D., of Lansing, President; Homer O. Hitchcock, M.D., of Kalamazoo; Hon. LeRoy Parker, of Flint; Rev. Daniel C. Jacokes, D.D., of Pontiac; Henry F. Lyster, M.D., of Detroit; John H. Kellogg, M.D., of Battle Creek; and Henry B. Baker, M.D., Secretary.

PRESIDENT'S ADDRESS.

President Kedzie gave a brief history of the legislation relative to illuminating oils in this State, beginning with the law of 1869. This law provided for county inspection, but was not generally enforced. The legislature of 1873, which passed the law for establishing the State board of health, also passed a law raising the flash test for oil to 150°F. The state board of health began its work with this law in force. In 1875 the legislature reduced the flash test to 140° F., and increased the inspection fees. There were scarcely any casualties under this law, but the illuminating qualities of the oil were not always good. Dr. Kedzie, as a committee of the State board of health, devised the chill test, which was recommended to and adopted by the legislature of 1877, and secured a good and safe illuminating oil. The legislature of 1879 abolished the chill test and reduced the flash test to 120° F. Each time the law has been changed the cost of inspection has been increased, and the last law will entail an annual expense of about $12,000 for inspection above the expenses incurred under the law of 1877.

INTERESTED FOREIGNERS.

The president presented a letter from Theodore H. Monk of the meteorological office at Toronto, asking for a set of reports of this board, as they desire to inaugurate a system of health and weather observations similar to that of the Michigan board.

Secretary Baker presented a communication from the secretary of the epidemiological society of London, expressing great interest in the work of the Michigan board, especially that for the registration of disease.

A letter was presented from Mr. Avery of Baltimore, relative to

LEAD POISONING

as set forth by Dr. Kedzie's articles on that subject, and claiming that he had demonstrated that electroplating the tin cans used in preserving fruit, and tin utensils of all kinds, with a thin coating of silver would prevent any poisoning thereby.

CATTLE DISEASES.

A communication was presented from A. J. Murray, veterinary surgeon at Detroit, relative to "cattle diseases in Michigan," and their relation to public health; also, a part of a letter from a member of the national board of health on a similar subject. These communications were referred to the new standing committee on "diseases of domestic animals as relates to public health."

THE SECRETARY'S REPORT.

Secretary Baker presented his report of the work in the office during the last three months. It included the distribution of a large number of the regular reports and other documents, and of the registration report of births, marriages and deaths. These were sent to meteorological observers, regular correspondents, sanitary exchanges, and other persons interested in such subjects in Michigan. Names and addresses of health officers were received from 760 townships, 113 villages, 39 cities. Abstracts of the proceedings of the last meeting were prepared and sent to nine sanitary journals, who desired the same for publication. These journals are exchanges of the board. Meteorological observations were regularly taken in the office of the board, and a condensed statement is each week published in the Lansing *Republican*. Weekly reports from over 60 observers of diseases have been received, examined and filed. Work on the compilation of these reports and of the meteorological reports has been continuously going on. The correspondence of the office is continually increasing, 606 pages of the letter-book being used in copying letters. Quite a number of meteorological instruments have been purchased and sent to observers, and some new stations have been established. A demand for weekly reports of diseases has been made on health officers of cities, as fast as the names have been furnished by the city recorders. The secretary has spent considerable time in supervising vital statistics, particularly those for 1877, and in studying deaths from certain diseases in a series of years. Many persons have visited the office of the board during the past three months, and most of them express surprise at the magnitude of the work carried on by the board. Communications have been received and referred to the chairmen of appropriate committees, as follows: Dr. Kedzie, 14, Dr. Hitchcock 16, Leroy Parker 4, Dr. Jacokes 1, Dr. Lyster 8.

The board has in mind the examination of candidates in sanitary science, and the examination papers on this subject used in the university of London and other foreign colleges have been secured for study in this connection, and Dr. Lyster reported a plan for the examination of physicians in sanitary science.

The standing committees were reorganized, as follows:

Epidemic diseases, etc. — Dr. H. O. Hitchcock.

Sewerage and drainage — Dr. H. F. Lyster.

Food, drinks and water supply — Dr. R. C. Kedzie.

Ventilation, heating, etc.— Dr. D. C. Jacokes.

Climate, etc., in relation to health — Dr. H. F. Lyster.

Disposal of decomposing organic matter — Dr. J. H. Kellogg.

Poisons, chemicals, accidents, etc. — Dr. R. C. Kedzie.

Occupation, etc., in relation to health — Dr. J. H. Kellogg.

Relations of schools to health, etc. — Dr. D. C. Jacokes.

Sanitary survey — Dr. Jacokes, Dr. H. B. Baker, and Leroy Parker.

Death-rate — Dr. Baker.

Legislation — Leroy Parker.

Finances of the board — Leroy Parker.

Mental hygiene — Dr. Hitchcock.

Diseases of animals — Dr. Baker.

Dr. Hitchcock made a report on depot privies, which included letters from the late Dr. Beech, of Coldwater, and J. E. Curtis, superintendent of the Michigan division of the L. S. & M. S. railroad, and made specific recommendations for remedying the nuisances which now prevail. Depot privies should never have a vault, but should be water closets connected with a sewer, or be supplied with dry earth or coal ashes; and it should be made the special duty of a station employe to see that the floors are scrubbed daily, the closets kept clean and in perfect operating order, and the whole closet thoroughly disinfected each day. In places where a sewer is not accessible, the closet in which the dry earth or coal ashes is used should be often cleaned, and the refuse buried. For water closets he recommended "Rhoads' porcelain seated hopper closet," supplied with Meyers' No. 1 waste preventing cistern. This closet is arranged to flush when the door is opened, and is just the thing for public places, as the hopper is non-absorbent, and the shape prevents persons using it from getting on it with their feet. For smaller stations, where a water closet could not be used, he described and recommended an exceedingly simple dry earth closet, but insisted upon the necessity of every day attention to it by an employe of the station.

The committee on sanitary conventions recommended that one be held in Detroit in December or January, and the next at Grand Rapids. Efforts will be made to get as large an exhibition of sanitary appliances together as possible. Manufacturers and dealers in sanitary appliances are requested to forward catalogues, advertisements, etc., and to correspond with the secretary relative to placing their wares on exhibition.

A SAMPLE OF RED FLANNEL,

from Dr. Nash, of Lapeer, reported to have caused sores, had been examined by Dr. Kedzie, and found to have been colored with analine which contained arsenic and tin.

REPORTS OF COMMITTEES.

Leroy Parker made a report as to the proper method of bringing suit in cases of nuisances; also, relative to collecting the statistics for the next U. S. census, and relative to authority of the board of health to kill horses afflicted with the glanders.

Dr. Kedzie made a report relative to the proceedings of the sanitary council of the Mississippi valley, held at Memphis, and in conjunction with the national board of health at Atlanta. He gave an extended account of the discussions, notably of that on quarantine. He spoke of a conversation with Dr. Billings of the national board of health, in which the following statements were made by Dr. Billings: The quarantine to be established by the national board of health must be uniform for the whole country. It is therefore necessary to be very guarded in the action of the national board, lest requirements which are essential for New Orleans and Mobile may destroy the commerce of New York and Boston. It is proposed to make such sanitary regulations as may and should be enforced in all places, and only such *national restrictions* by quarantine as will not disturb commerce seriously, and, for any stringent quarantine in points especially threatened, to secure action by State and local quarantine.

A resolution was adopted, favoring the organization of sanitary associations auxilliary to local boards of health.

The usual number of bills were audited, and ordinary business transacted. The next meeting of the board will be on October 14, 1879, at nine a. m.

EPITAPH ON DR. JOHN LOW, Founder of the Faculty of Physicians and Surgeons. Obiit 1612.

"Who cured Many while He lieved,
So gracious, He no Man Grieved.
Yea, when as Physick's Force oft fayled,
His Pleasant Purpose then prevayled.
For of His God He Gott the Grace
To Live in Mirth and Die in Peace.
Heaven Hes His Soul, His Corps this Stone,
Sygh Passinger, and soe Begone."

DR. GEORGE W. ELKINS, of Chester, Illinois, has recently been appointed surgeon to Illinois Southern Penitentiary.

Domestic Correspondence.

ARTICLE XIV.

NEW YORK CITY.

Editors CHICAGO MEDICAL JOURNAL AND EXAMINER :

In the city here just now there is a condition of repose, medically speaking, which makes letter-writing a not very easy matter. Our eminent men have gone to Europe to get rest and new ideas, or to watering places in this country, where they can gather in the occasional shekel at fashionable hotels. This latter practice a good many of our younger men also have embarked in, and many of them do more business in the summer than winter months. In every hotel, amongst the places about the city, there is seen a neat placard in the office announcing that Dr. Such-an-one, of New York, is resident physician. All this to the great pecuniary depletion of afflicted guests and to the grief of the local practitioners.

Those of us who remain in the city, meanwhile, divide our time between controlling diarrhœas and fighting the very elevated temperature with such antipyretic measures as steamboat excursions and cooling drinks.

We have had a little interesting reading furnished us by a polemic upon the caliber of the urethra between Drs. Sands and Otis. Dr. Sands began, I believe, by asserting in a clinical lecture that the theory advanced by Dr. Otis in regard to reflex spasms of the urethra was both untrue and unsafe.

Dr. Otis had asserted that many, if not most deep strictures were due to a slight stricture in the anterior portion of the canal which by reflex action caused spasm further back. He claimed that much harm and unnecessary cutting was done by operating on the deeper portions, where the root of the trouble lay near the meatus, which part should be slit up and dilated freely. Dr. Sands, on the other hand, denied the truth of this and ridiculed the tremendous lacerations which this very innocent portion of the organ was too often subjected to, instancing cases also where he had seen the meatus cut so freely that the stream of urine could only dribble from it. Various other points were brought up also in the discussion, and each eminent gentleman in turn impeached the veracity, courtesy and surgical attainments of the other. It is difficult to say which came out ahead. Certainly nothing very definite or valuable was given to the medical public, and we were only furnished the not very rare spectacle of a couple of surgical brethren bumping their heads together and each calling attention to the very hollow sound that came from the cranial cavity of the other. Dr. Otis has made a valuable contribution to urethral surgery in his having shown the real caliber of the urethra and the frequency and importance of strictures at the meatus. When he gets an idea in his head, however, he makes a good deal of thunder over it, and the present one requires less discussion and more clinical observation before it can be considered proved.

Much of the medical energies of New York are directed in summer towards the hygienic condition of the city, and we are likely in time to become quite a model as regards sanitation and within the limits that our mode of living allows. Every year a corps of visiting physicians to the tenement houses is appointed and they are sent around to hunt up sick children and give them paregoric and chalk mixture, supplying them also with tickets to a free excursion on the river. When the work is faithfully done, and most of it is so performed, there is no doubt of the good results. There is an astonishing amount of lethargy and indifference amongst many of the poor when their children get sick. There are people who will let their children go until just on the point of death rather than take the trouble to call in a dispensary physician not two blocks away. When, however, a physician calls of his own accord and gives them medicine and an opportunity to take a sail in the bay with the babies, they will gratefully accept it.

A new move also has recently been started by those interested in tenement house reform. Forty inspectors have been appointed who are to visit all of the twenty-five thousand tenement houses in the city and take careful notes of every detail concerning them. When this work is finished the board of health will have a complete record of the sanitary condition of every tenement house in the city, sewerage, light, cubic feet of air, etc. It will be invaluable as the basis for future work in the direction of reform amongst these places.

We have had three or four cases of yellow fever here, but no one has been alarmed. Some of the cases showed, however, that the capacity of the yellow fever germ for defying precedent and evading pathological laws is still unexhausted. The bark Wallace left Havanna June 28th, and reached quarantine July 3d, with two cases of malarial fever on board. She was quarantined for ten days and thoroughly disinfected. By the end of that time the sick seamen were well and the vessel proceeded to the city. About July 26th the stewardess was taken ill with symptoms of malarial fever and was sent to Presbyterian Hospital; two or three days later she died, and just before death the symptoms becoming suspicious, a post-mortem was made and the evidences of yellow fever were found. The incubation of the disease was therefore nearly thirty days, unless it is assumed that the poison was carried about in her clothes for twenty-five days and that it then "struck in." In any event the case is perplexing. Nor is this the end of the now much noted vessel. After having been thoroughly fumigated, scraped and washed at quarantine. she went to a dock in Brooklyn; while there a clerk who occasionally visited her was taken with yellow fever and died. This shows at least that fumigation is not at all reliable, and I find that there is a growing skepticism about it. Indeed the only certain thing is fire. Next to it we must first try fumigation, hoping by this method to kill the germ—if it is a germ; then, after this, we must try baking, in hopes that in this way we may decompose or drive off the infecting gas—if it is a gas. Mortals can do no more in that line at present.

New York has generally been thought to have plenty of hospitals but there is to be, in fact now is, one more. The Marine Hospital Service has established one on Bedloe's Island, an island in the harbor about a mile below the Battery. It will accommodate nearly one hundred and fifty patients and will soon be enlarged. The seamen treated by this service had heretofore been placed in the various city hospitals ; but it is the policy of the service—and a wise one—to treat its own patients, hence the present institution. It will prevent the dangers of any more yellow fever cases being carried to the city and be of much value in that respect. With the perfectly pure air (and plenty of it) which sweeps across the island there will be an opportunity also to learn whether Lister's method is not a superfluity under perfectly salubrious conditions. I am quite confident myself that such a conclusion will be reached. Much valuable work by the way, both medical and surgical, may be expected of this service in the course of a few years, for it is, as far as statistics are concerned, a vast hospital treating from twenty to thirty thousand patients a year, and these statistics are to be carefully worked up.

In visiting some hospitals a short time ago I was quite struck by the discrepancies in the treatment of pleurisy-with-effusion. In one hospital the use of the aspirator is absolutely forbidden no matter how long the effusion remains and provided of course that it does not become purulent. The dictum is that the third aspiration always causes empyæma. The treatment employed was that of Niemeyer : blisters, diuretics, tonics, possibly cathartics. A short time before, at another hospital, I saw about forty ounces of serum removed from a chest in which the disease had lasted for three or four weeks. There was no dyspnœa, but the patient had a little fever, had no appetite and was in fact not doing well. The serum did not re-accumulate after its removal and the patient steadily convalesced. There was no doubt about the benefit of the operation. Although no one will deny the danger of aspiration in subacute pleurisy it is not safe to dogmatize.

I fear I have put but little of interest or value in this letter, but I beg you to consider the temperature, and allow me to finish rather abruptly with a prescription for spermatorrhœa :

Tr. humuli	40	C. C.
Tr. camph.	30	C. C.
Tr. opii.	10	C. C.
Syr. tolu, q. s. ad	100	C. C.

M. Sig. 4. C. C. at night.

It was given me by Dr. W. C. W. Glazier, Asst.-Surgeon Marine Hospital Service, and has had much endorsement, some of it very strong and rather amusing. The sailor is very subject to the affliction for which this is prescribed, but in him the disease almost always yields to the above remedy. One sailor who returned cured said that it had such a magic effect upon himself that he had given it to his messmates, and had in fact treated and cured the whole crew during his voyage; thereby winning for himself much glory and depriving the proprietor of a "Museum of Anatomy" here to whom seamen very generally resort, of a number of generous fees.

I will add another prescription, much used amongst this class, for gonorrhœa:

Zinci sulpat.	2	Grms.
Bole Armenian	4	"
Morph. sulph.		5 "
Aquæ	572	C. C.

M. Sig. Use as injection four or five times a day.

There is nothing that will, as a rule, lessen the urethral discharge with more rapidity than this, at least amongst the seamen, and their quota of this particular variety of pathological secretion is sufficiently large to make the evidence quite valuable.

Article XV.

Corporal Punishment.

Editors Chicago Medical Journal and Examiner:

My attention has for a number of years been called to injuries caused by occasional cases of too severe or recklessly executed punishment of school children. Foremost educators, while not believing it expedient to prohibit corporal punishment, acknowledge that injury, injustice and sometimes death even, do now and then occur from its use. These serious results may arise from fright or from concussion of the brain produced by merely jerking the child about, or — the most frequent cause — inflicting the punishment upom the child's head. I have known death to occur solely from the fright, although fatal results are not likely to arise except from immediate blows upon the head. No one form of punishment is so dangerous as boxing the child upon the ear. Not only is injury to the organ of hearing often produced, but inflammation of the brain frequently follows, and death has been the result. In the family this matter of injurious methods of punishment is not by any means beyond our influence, if we will but take pains to inform the people upon the subject. If corporal punishment is allowed at all in schools, its use ought to be carefully guarded. No teacher should be allowed to punish a child by rudely jerking it about, by striking it anywhere on the head, or with any instrument whatever, except it be flexible and with smooth edges. These requisites are best fulfilled by a rubber strap with rounded edges.

Moreover, no punishment should be permitted except it be inflicted in the presence of a principal, another teacher, or a school trustee, as a salutary check upon undue temper or excitement. Every case of corporal punishment should also be reported in writing to the board of school trustees, stating the offense of the pupil. the manner and severity of the punishment. I have known the above rules adopted by a board of school commissioners to reduce the number of cases of corporal punishment eighty-eight per cent. in one month, and the school continued meanwhile even more orderly and satisfactory than before. I am about collecting statistics of serious and fatal injuries caused by corporal punishment, and I write this article to request all the readers of the JOURNAL AND EXAMINER to forward to me statistics and history of all cases that may have come to their knowledge, with the date, place, name of child, character of punishment, and its results; also the offense for which the punishment was inflicted. Add other points, history, etc., if time and inclination permit. I urge all to give the subject the little attention needed, to write me the main facts, at least, of all cases they have known, and thereby make the report more valuable. The information thus obtained I will communicate through this journal.

B. P. MARSH, M.D.

Bloomington, Ill.

ARTICLE XVI.

PHYSICIANS' VACATIONS.

Editors of the MEDICAL JOURNAL AND EXAMINER :

What the *Northwestern Christian Advocate* says of ministerial vacations applies equally to physicians. The physician as well as the minister will come back from a sojourn in the country, the mountains or at the sea shore, "with fresh coals from off the altar, and such return will quicken his own zeal, and mutual good will follow." His people, as well as the minister's, all take a vacation, and are willing to give a vacation. It is undeniable that physicians, of all people, are most indifferent to their own health, and nothing but that happy division of labor into mental and physical, sedentary and out-door life, accounts for the good average health of the profession, in spite of constant, uninterrupted application to the most difficult and dangerous of arts. The legitimate medical work is not a lucrative one, as every physician knows, notwithstanding a good deal of boasting on the false principle that pretended success begets success, and the popular opinion. But there are few physicians who cannot lay aside a few hundred dollars for a quiet summer vacation with his family and friends. And as things go now, he will probably find wherever he may go among the popular places of resort, many of his families who will rejoice at his presence, and that they are not compelled to entrust themselves to strange physicians, who, destitute of that intimate knowledge with constitutions and temperaments which the family physician alone possesses, have no resource but the raw principles of their art. Some of the older physicians go away for the express purpose of emancipating themselves from the laboriousness of their professional work, but the young man, and many at middle age, dare not leave home, lest they suffer much loss and their hard-earned triumphs be neutralized. But if the experience of some of the physicians who have left home for health and recreation be considered, it will be seen that they have not only not lost but gained. My late partner in Boston was absent two years in Europe, Egypt and the Holy Land, and the very day of his return he had as many calls as he could attend to — not because he put forth a personal effort, but because his return had been waited for with expectancy, and *that succeeding year's work* repaid him in money, for his mind had been invigorated and enriched and his physical strength so much increased that he worked without friction. Then, too, we all recollect the experience of Sir Henry Holland, who, at the outset of his long and successful medical career laid out a scheme of annual travel. He says it was in no way injurious to him, but adds: "Had I not been attached to my profession, and had it not happened that my practice lay chiefly among the classes who are absent from London in the autumn, the result might have been different." His early resolution as to the matter of travel, steadily persevered in, proved gain to him in all succeeding life. "I have come back each year," says he, "refreshed in health of body and mind, and ready for the ten months of busy practice which lay before me. On the day or even hour of reaching home from long and distant journeys, I have generally resumed my wonted professional work. The new methods of inter-communication since steam and electricity have held empire upon the earth, often enabled me to make engagements for the very moment of my return." He took long journeys, and was absent a long time, and was known the world over, not only as one of the greatest of physicians, but one of the greatest of travelers. Thus he had the amplest opportunity to study *man*, which is always better than the study of books, especially to one jaded out with professional labor. It is not necessary, however, to take long journeys, or aspire to the reputation of a cosmopolite in travel, but for mental and bodily rest and invigoration to take ourselves that change of air, scene, diet and companionship which other professions find necessary, and which we all recommend to our patients.

DR. JAMES I. TUCKER.

Editorial.

MEDICAL SOCIETIES.

Is it wise to encourage the formation of medical societies with territorial limits including parts of two or more States, or the whole of a group of States? This question has been forced upon our attention several times during the last few years, by the formation and maintenance of the Inter-State Medical Society, embracing a small part of Illinois and Iowa, and a Tri-State Medical Society, embracing a large part of the States of Indiana, Illinois and Kentucky. And now, in looking over the proceedings of the Louisiana State Medical Society, we find that initial steps are being taken to organize a "Southwestern Medical Association," to embrace the States of Louisiana, Mississippi, Alabama, Texas and Arkansas. That the subject of a proper and efficient organization of the medical profession is one of great importance, will be admitted by all who have given it thoughtful attention. At the recent meeting of the American Medical Association, in Atlanta, Dr. S. E. Chaillé read a report or paper on the subject, in one of the Sections, that was deemed of sufficient interest to have the greater part of it read before the whole Association. In accordance with the recommendations of that paper, a committee of five was appointed, to report at the next annual meeting, on the ways and means for securing greater uniformity and strength of organization of the State Medical Societies and their auxiliary branches. At present a few of the State Medical Societies partake more of the nature of annual mass meetings of the profession than of permanently organized representative bodies, they having no affiliated local societies and receiving no regularly appointed delegates. This is more especially the case in Michigan.

The State societies in much the larger number of States are composed of a mixed membership, consisting in part of delegates appointed by district, county and city medical societies, and in part of permanent members who have either previously served as delegates or have been elected by direct vote of the society. Some of the State societies, and many of the local organizations, are incorporated by special legislative enactments, and many others are simple voluntary organizations, sustained only by such constitutions and by-laws as each has chosen to adopt.

If the mutual improvement of the members, and the direct advancement of medical science, were the only objects to be gained by medical society organizations, the diversities to which we have alluded would be of no importance. Neither would it be of any importance whether a society was composed of members living in parts of two or more States, or wholly in one State, or in the whole of three or four States. But this would be a very narrow and erroneous view of the objects that should be obtained, from a proper social organization of our profession. We have to deal not only with the acquisition of knowledge and its application in the treatment of disease, but we must deal equally with all the important questions involved in preventive medicine or sanitary science, as well as in the education and ethical relations of the profession itself. A proper view of these subjects will show any thoughtful mind that we have relations to the proper enlightenment of the public, and the guidance of legislation concerning many of the more important interests of general society, no less intimate or binding upon us than those pertaining to the direct treatment of the sick. The obligations arising from these relations to certain general interests of humanity, and to our own ethical and educational interests, cannot be efficiently performed without concert and concentration of action and expression ; and this can be obtained in no other way than by professional organization and frequent interchange of views. To give force and efficiency to these mutual interchanges, and to expressions relating to questions concerning public health and welfare, the social organizations must be sufficiently complete to fully and fairly represent the whole profession ; and in its subdivisions must correspond as nearly as possible with the municipal or legislative divisions of the people for whose interests we labor. If, as in most of the countries of Europe, all our laws were enacted and enforced by one general government, it would matter but little whether, in the formation of medical societies, any attention was paid to State or county lines or not. But with us, nearly all the legislation relating both to the education of our profession and the sanitary interests of the people, is done by State and municipal governments acting independently of each other. This fact alone is sufficient to show the necessity of having our professional organizations correspond mainly with these political or governmental divisions of the country. It is natural and proper that the physicians of each city, county and State should entertain a special interest in the sanitary condition and legislation of their own State or municipality, and should be better prepared to give the people advice concerning these matters than those of distant States. Again, only a small proportion of the whole number of practitioners can afford to leave home or go any distance to attend medical society meetings; and only a very much smaller number can afford to leave home and spend a week to attend medical society meetings more than once or twice a year. From these considerations, it is obvious that in our country the natural plan for organization of the profession, and the only plan that admits of being made so complete as to include all the regular members of the profession, is that of city, county, state and national societies. The aim should be, to make the two first embrace in their membership all the regularly educated members of the profession in good standing, in their respective cities and counties; and the two last should be essentially representative bodies — the state society receiving delegates on a uniform ratio of representation from the city and county societies, and the national organization receiving delegates in like manner from the state societies. This is essentially the plan now existing in a large proportion of the states. The city and county societies holding their meetings at the doors of their membership, can meet often and confer the benefits of free interchange of views and development of opinions on all the members, and as they elect the delegates to the state societies, these will concentrate the facts, opinions and policies developed in the local organizations, and give whatever is valuable a just and efficient influence in guiding public opinion and legislation in their respective States, concerning the sanitary interests of the people and the education of the profession; and the national organization being composed essentially of delegates from the several state societies, should constitute a common bond of union for the whole, not only still further sifting and concentrating the facts, opinions and policies developed in the state societies, and through their several delegates returning them back revised and corrected, to become common property for the whole profession; but also by the free social intercourse of the delegates, more effectually destroying local prejudices and sectional rivalries, and uniting the profession of all the states in fraternal fellowship. It is easy to see that if such a plan was actually carried into effect in each state and territory, it would constitute so complete an organization that it would be possible for our profession to regulate all matters pertaining to the education and qualifications of its members, as the clergy do through their conferences, synods and diocesan assemblies — or the legal profession through the courts. Is it not, then, greatly to be desired that all possible influence shall be concentrated in the direction of extending and perfecting the local social organizations of the profession, and in making the state and national organizations more strictly representative in their character, more efficient in their modes of work, and more definite in their plans and objects? Will not the organization of societies intermediate between the State and national associations necessarily tend to divert interest and attention from both of these? If we form a Southwestern Medical Association, why not a southeastern, a northwestern and a northeastern as well? If we have a *Tri-state* society in one instance, why not organize bi-state, tri-state or quadruple-state societies all over the Union? But if such organizations multiply, is there not danger that both the individual state, and the national associations, will be so far weakened and disintegrated as to deprive them of all efficiency, and the profession find itself again fostering mere sectional interests and prejudices, instead of State efficiency and national harmony. The subject is one of great intrinsic importance, and we hope it may receive the attention it deserves.

NATIONAL AND STATE BOARDS OF HEALTH.

It is pretty generally known that the last congress not only appointed a "National Board of Health," of which Prof H. A. Johnson, of this city, is a member, but half a million of dollars was appropriated and placed at the disposal of said board.

The law creating the national board contemplates its direct co-operation with state boards of health, wherever such exist, and with such other state quarantine and sanitary authorities as may have been established. It is desirable that all our readers should be well informed in regard to the relations between the national and state boards, particularly in regard to the expenditure of money and the obtaining of supplies. Hence we copy the following in full, from the *National Board of Health Bulletin*, for August 16 :

NATIONAL CO-OPERATION WITH STATE AND LOCAL BOARDS.

Although the propor method of securing the co-operation of the national board of health with state and local boards, in preventing the spread of yellow fever from one State into another has heretofore been published and widely circulated, it happens almost daily that applications are received at the office of the national board which require to be returned to the parties making them, by reason of their failure to comply with the conditions under which the board is authorized to grant the desired aid. It is accordingly found to be necessary again to call attention to certain points which should be observed by state and municipal authorities in making application for aid and co-operation. To this end the following circular has been prepared and is now published.

CIRCULAR NO. 7.

The following rules govern the action of the national board of health at present in aiding State and local boards to enforce regulations of such boards preventing the introduction of contagious and infectious diseases into the United States, or into any one State from another.

1. The regulations to be enforced are those of State and local boards, whether adopted at the recommendation of the national board or otherwise, and not those of the national board. The national board has recommended certain regulations for adoption by State and local boards. Up to the present time these recommendations have been adopted by the following boards, viz.:

The State boards of Arkansas, Illinois, Kentucky, Louisiana, Mississippi, New Jersey, North Carolina and Tennessee; the local boards of Brunswick, Ga., Brownsville, Tex., Bayou Sara, La., Cairo, Ill., Carlinsville, Ill., Decatur, Ala., Delhi, La., Fernandina, Fla., Huntingdon, Tenn., Jacksonville, Fla., Lauderdale County, Mississippi, Meridian, Miss., Mobile, Ala., Pensacola, Fla., Shelbyville, Tenn., Saint Louis, Mo., Tampa, Fla., Vicksburg, Miss.

The regulations of the above named boards are therefore to a certain extent uniform, and approved by the national board, and therefore are such as it will aid in enforcing, when necessary.

State and local boards which have not adopted the recommendations of the national board are requested to do so as soon as convenient, in order to secure uniformity of action.

It should be observed that these recommendations are for a minimum amount of precaution, and therefore that additional precautions may be taken by state or local boards if deemed necessary, it being borne in mind all the while that the end in view is to secure or restore the public health by measures which interfere with travel or traffic as little as possible; in other words to render commerce *secure;* and (with rare exceptions) *not to put an end to, or even suspend it.* In this connection it is proper to add that non-intercourse quarantines, especially by *local* authorities, are not approved by this board.

2. Applications to the national board of health for aid should be made by or through the state board; or in case there is no State board, then by or through the governor of the State.

3. Application for aid should give *details* of what is required, and the estimated cost for each item. Amongst other things should be specified the duties and powers of the officers whose appointment or payment is requested.

4. The application should be accompanied by an official cer-

tificate from the governor of the State or the mayor or other chief officer of the municipality, respectively, to the effect that there are no state or municipal funds available to carry out the particular sanitary measures because of which the application is made. Official information should be given therein of the adoption by such state or local board of any rules and regulations that have been recommended in such case by this board, and of any other state or local rules and regulations that appear to be necessary for the purpose in question.

5. Of the supplies required for the sick those furnished by this board to local authorities shall, as a general rule, be applied to other objects than those of shelter and furniture, which should be furnished by such authorities. Where however it shall be otherwise ordered the local authorities will be expected to account to this board from time to time for the safe-keeping and proper use of the furniture, provisions, medicines, etc., so furnished.

6. Whenever this board shall order the erection of temporary buildings, or provide any buildings for the purpose of quarantine the necessary contracts therefor shall be made by one of its own officers or agents, subject to the approval of the board or of its executive committee.

7. Care should be taken that the officers to be paid from funds furnished by the national board are employed only in such number and for such time as there is actual need of their services. The national board of health reserves the right of judging from time to time, by means of reports received from its own agents, whether such need exists.

8. Funds are not furnished by the treasury to state or local boards. They are placed in the hands of the disbursing clerk of the national board of health, by whom bills, properly certified and approved, will be paid by check on Washington or New York. All bills must be in accordance with the estimates as approved by the secretary of the treasury, must be made out in duplicate on forms furnished by the national board, and be *certified*, as to their correctness, by some authorized officer of the state board or by the governor of the state and must be approved by some member or special inspector of the national board duly authorized.

The names of all persons whose services as inspectors, etc., are to be paid for out of its funds must previously to their appointment be submitted to and approved by the national board.

It is expected that at the close of the season a full report will be made by state boards of health to the national board as to their operations in carrying out those rules and regulations for the prevention of the spread of yellow fever, in which the national board has rendered aid and co-operation, and it is desired that copies of all orders issued from time to time to inspectors shall be promptly furnished to this board.

It is to be remembered that a full account of its expenditures must be made by the national board of health to congress, and that such account ought to set forth these expenditures in detail, and exhibit their propriety and necessity.

It is therefore essential that state and municipal boards shall co-operate with the national board in supplying material for such an account, and it is earnestly desired that they will preserve and furnish due evidence of the propriety of each item of their expenditure for both persons employed and articles purchased with the funds in question: particularly as the future aid of both state and national boards must depend largely upon the record for efficiency and economy made during the year now current.

PHYSICIANS' VACATIONS.—One of our correspondents calls attention in the present number, to the subject of professional vacations. He seems to think a summer vacation or periodical recreation is as necessary for the physician as for the clergyman, the lawyer, the merchant, etc. And he intimates that the physician by resorting to some one of the fashionable watering places, would not only find recreation and recuperation, but could also keep up some profitable practice by professional attention to such of his home patrons as he might find at the same resorts. The reasoning of our correspondent might be good so far as pecuniary considerations are concerned, if the physician was so *unfortunate* as to have the principal part of his practice in such families as are able to take summer vacations and he can have them all spend their vacations in one place. But the truth is, that not one practitioner out of a thousand has such a practice; and not one family out of a thousand takes summer vacations. The fact is, that the great laboring classes constituting three-fourths of the human race, have no vacations. To them, the summer is more especially the season of active business, as well as the season of most sickness. Suppose the busy practitioners of medicine all take the advice of our correspondent, and follow some half dozen of their more wealthy patrons to the watering places and noted summer resorts, what is to become of the thousands left at home with their sick wives and babies? But even if all these were of no account, we should still doubt the correctness of the idea or principle that seems to underlie the modern practice of taking annual *vacations.* The prevalent idea appears to be that the merchant may confine himself to his counting-room from early morn to late in the evening; the lawyer to his office and the court-room; the clergyman to his study and church; the doctor to his patients; and the artisan to his shop; ten or eleven months of the year, regardless of daily rest, fresh air and needed exercise, all because they are going to have one or two months of vacation in which to recruit. If each in his individual avocation finds it difficult to keep his weary limbs and more weary head at its daily task until the set time for the vacation comes, he has only to smother his uncomfortable feelings by a little more of those narcotics and anæsthetics found in tobacco and the varieties of fermented and distilled drinks, or to go to his doctor for a blue pill and some bromide, meanwhile sustaining his courage by the remembrance that each day brings him nearer to his annual panacea, the vacation. Stript of its fashionable pretenses, all this modern noise about annual vacations for the maintenance of health, is founded upon the fallacious idea, that the latter is a commodity to be gathered in at some particular season, and stowed away in some part of the body, like a stock of merchandise or provisions, to be drawn upon for the rest of the year.

When all classes learn that health is a *condition* of a complicated and delicate organization, to be maintained by a daily balancing of the waste and supply, exercise and rest, and not a commodity to be stored up at one time and drawn upon at another, they will also learn to adjust their daily occupation more in accordance with physiological laws, and we shall hear much less about vacations. These remarks, of course do not apply to proper changes of climate for the purpose of aiding the removal of diseases or known predispositions to disease; nor to traveling in distant places or countries, either for business or pleasure; but simply to that very popular notion among all classes, that a vacation of a few weeks and a resort to some favorite place, is an ample remedy for the accumulated ills of all the rest of the year.

EXPLANATION. — The article in the present number of the JOURNAL AND EXAMINER, headed, "On Fracture of Basio Cranii," was sent to us by the secretary of the McLean County Medical Society, with the statement that its publication was requested by a vote of the society. It being a good article, although the name of the author was not appended, we sent it to the printer and immediately wrote to the secretary for the name and residence of the author, but up to the time of going to press nothing further has been heard from him. Hence the article appears as an orphan for the present.

MEDICAL COLLEGES. — Before another number of our journal will reach its readers, the annual lecture terms in the medical schools in this city will have commenced. The general introductory lecture to the course in the Chicago Medical College will be on the evening of September 30; that in the Rush Medical College on the evening of September 30; and the first lecture of the course in the Woman's Medical College will be at 10 a.m., of the first Tuesday in October.

LACERATION OF CERVIX UTERI. — Dr. S. C. Thompson, of Cedarville, Illinois, sends us an account of a case he regards as one of laceration of the cervix uteri, giving rise to severe and protracted suffering; and which was ultimately cured by wearing a well adjusted Fowler's pessary. Hence he asks the question, whether, the proper and skillful use of this particular pessary may not be substituted for Emmet's operation, in the treatment of this injury.

Reviews and Book Notices.

ARTICLE XVII.—THE REPORT OF THE DEPARTMENT OF HEALTH OF THE CITY OF CHICAGO, FOR THE YEAR 1878.

The recent appearance of this annual document suggests a number of interesting reflections. A considerable portion of the report, aside from the purely statistical matter, is occupied by an account of the investigation of trichina in pork, conducted by Mr. H. F. Atwood, vice-president of the State Microscopical Society, and Dr. W. T. Belfield, Demonstrator of Physiology in Rush Medical College. Out of one hundred hogs examined by these gentlemen, eight per cent. were infested by the parasite. They, however, were able by their experiments to confirm the opinion of previous investigators, that a temperature less than that of boiling water is sufficient to destroy the trichina, so that cooked pork need not be feared. Dr. Belfield went still farther. He swallowed a piece of fresh meat in which the microscope exhibited twelve living worms, but he has never experienced the slightest disagreeable result. It is thus rendered highly probable that a considerable dose of the parasite is needed to produce sensible toxic effects.

The subject of regulating offensive trades forms a very interesting section of the report. The health commissoner has favored us with a full account of the manner in which the "143,227,070 pounds of blood, bones, intestines, scraps, etc., were furnished by our own slaughtering houses, to be cooked and dried for market during the year past." The careless manner in which this was done has been the cause of the fearfully offensive odors which for years have disturbed the comfort of our citizens. The commissioner gives a very graphic account of the difficulties which were encountered in the effort to abate this nuisance. The final triumph of the officials who were charged with this matter, shows what can be accomplished when energetic legal measures are based upon sound moral principles. No man has a moral right to deliberately create and maintain a nuisance in the face of his fellow men. Planting itself upon this high and unassailable position, the Supreme court of the State amply vindicated the rights of the people, and permitted no petty quibbles to hinder the operation of the measures of self defense for which we are indebted to the ex- city attorney, Hon. Richard H. Tuthill. It is, however, to be regretted that from this gallant conflict the officials did not emerge with hands thoroughly clean. The evil which they attacked was a nuisance of the most offensive character, but there is not the slightest shadow of evidence that it was dangerous to the health of the city. In their zeal against the enemy, the officials did no little harm to the community by painting the foe in colors darker than could be justified by the facts. Such stenches are very disagreeable, but it has never been shown that they produce or even aggravate diseases. To say nothing of considerations drawn from chemistry and physiology, the mortality reports of the city are a sufficient proof of this proposition. With an annually increasing production of stenches there has been a continually decreasing rate of mortality. We have no doubt that many delicate persons have experienced an increase of suffering in consequence of reading and hearing so much about the dangerous character of the slaughter-house gases. For this the slaughter-houses are not so much to blame as the ignorance or the zeal which propagated such errors.

The brief remainder of the report is occupied with a variety of subjects, first of which may be noticed the returns of births and deaths, from which it appears that the number of deaths during the year 1878 was 7,422. "The total death rate to population was for the year 16.50 per 1,000;" 11,152 births were registered during the year. The commissioner rightly believes that this figure still falls "short of the actual number of children born in our city." He also volunteers the statement that "the legal value of such registration is of vast importance, and the humblest born child has rights in this matter of which our profession is made the guardian." Now, if it is true that the value of such registration is of vast importance, and if the humblest-born child has rights in this matter, there is no one to whom the care of such valuable rights more properly belongs than to the legal and natural guardians of the child, its parents. If the law-makers hold the opinion that the protection of this right should be taken from those who are most interested in its security, and should be assigned to strangers who have not the slightest interest in the matter, it is worth while at least to discuss the wisdom of trying to secure the desired result by police regulations which can be evaded without difficulty, and which, moreover, are in direct antagonism with that article of the State constitution which declares (Art. II, Sec. 13) that "private property shall not be taken or damaged for public use without just compensation."

We are very well aware that the world is full of people who believe in making doctors work for nothing; but certainly no reputable physician, even though he be the tenant of an official position, should ever countenance such injustice. Every law, moreover, which, like this, diminishes the responsibility of parents by transferring a portion of their duty to the shoulders of strangers who are reluctant to assume such care, is a positive injury to the entire community. Good laws seek to foster the sense of individual responsibility where it belongs. Bad laws diminish that sense, by transferring to the government, or to certain classes, those duties which pertain to every citizen in his private capacity. In pleasing contrast to the sullen brutality with which our new State law demands uncompensated pecuniary outlay and service on the part of physicians, is the recent action of the United States government in connection with the approaching national census. A polite note from the superintendent of the census invites, but does not command, a return of deaths from ever physician. The necessary forms are furnished, post paid each way. If any additional expense should be incurred, it will be promptly refunded by the government. Such a request cannot fail to meet a cordial response, even from men who would go to prison rather than yield to a forcible invasion of their constitutional rights.

A brief paragraph is all that is devoted to scarlet fever. The report states that "placing of warning cards still receives the almost unanimous approval of the profession in the city"—an assertion sufficiently robust to rejoice the most ardent admirer of the late Baron Munchausen. The fact is, that the profession has learned to "get around" the law so comfortably, that its present administration is no longer the nuisance which it once was. But, even if the profession were unanimous in their approval of warning cards, that would not make it right for the government to intrude them into the private abode of private citizens. The warning card, as a notice of sickness, is in itself harmless enough. but as the symbol of an officious intrusion by the government, it is thoroughly outrageous. The officials may issue advice, and may properly recommend the use of cards, if they must do something; but when they go beyond this limit, they become impertinent, offensive, and injurious to the cause of sanitary improvement, as the frequence with which scarlet fever is successfully concealed abundantly proves. In dealing with this subject, the officials need not wait for orders from Boston, but they should learn wisdom from the course of the intelligent physician, who, when people refuse to be drenched with Glauber's salts, asks himself whether a bottle of citrate of magnesia or a sugar-coated pill will not do the work as well. Doctors who insist upon forcing nauseous doses into their patients need not be surprised if common folks keep away, and do not let them know when they are sick—especially after they have learned that the filthy drought does no good. Health officers may very properly *advise* such measures, if they consider them useful; but by legislative enactment to *compel* the posting of warning cards and the private performance of other sanitary operations which may chance to be fashionable, is a great mistake. Sanitary science, so-called, is in a very crude condition, and much that is now thought essential—remedies which enthusiasts are anxious to ram down the throats of everybody—will soon have to be abandoned, because in direct opposition to those higher truths of science which are at present known to comparatively few, but which will become the common property of a subsequent generation. It is a very difficult thing to repeal even a bad law; consequently it is unwise to give the authority of law to the shifting opinions of a half formed science. Already one consequence of erroneous teaching and unscientific law-making is apparent in the growth, inside as well as outside of the profession, of a morbid public sentiment regarding the nature and functions of disease, which will greatly retard the recognition of true science. Until the fundamental principles of science, and the highest results of experiment and observation become more generally known to sanitarians, and to the medical profession, health officers should be very cautious about threatening people with the terrors of the law. It is too much like trying to create an established church by the aid of dungeon and faggot. For a long time yet, the principal occupation of our officials should be the search for truth and the diffusion of genuine knowledge, rather than the enforcement by law of questionable dogmas based on doubtful hypotheses of the most transitional character.

The proceedings of the Health Office relative to small-pox and yellow fever scarcely call for comment. We may, during the prevalence of the imported epidemics — cholera, small-pox, yellow fever, typhus fever and the plague — cheerfully applaud the very methods which are utterly wrong in the conduct of the government towards those ordinary endemic diseases for which the ordinary resources of the community have always sufficed. As in time of war we praise the general who rides rough-shod over ranks of living men, with no thought of anything but victory ; so in times of imported epidemic disease, the officials may exercise a license which no common endemic can ever excuse. The great fault of our officials consists in the fact that they have not yet learned in times of peace to refrain from martial practices. A conspicuous example of this common defect is found in the following declaration of the report (p. 9) : "To reform tenement houses, suppress epidemics of preventible diseases, reconstruct, clean and disinfect vaults, regulate offensive trades, inspect the food supplies, and destroy or consign to the rendering tanks everything unwholesome, to elevate the standard of municipal cleanliness in streets and alleys and yards — all this is the legitimate work of the Health Department, and concerns every citizen." It would be difficult to find a better illustration of that confusion of ideas which is so common among inexperienced sanitarians who have not yet mastered the alphabet of sociology and of political science. Because it may be proper for public officials to keep the streets and alleys clean, it does not follow that it will be wise for them to "reform tenement houses, and reconstruct vaults." Because it may be expedient that they should maintain quarantine against foreign plagues, it does not follow that they can wisely or successfully attempt to "stamp out" endemic diseases which are most efficiently treated by private enterprise. The utterance of the Commissioner amounts to nothing more nor less than the adoption of the entire Communist programme, which throws upon the State the whole responsibility for the care and maintenance of every citizen. It, moreover, attempts to justify the importation of rude, despotic methods into the quiet repose of civil life. This reckless firing of revolvers and slashing with sabers among inoffensive citizens — this cheerful willingness to blow up houses, with people in them, when there is neither war nor conflagration to justify such violence — this stentorian roaring for a fire-engine to put out a bedroom candle — is what fills thoughtful men with disgust at many of the antics of our sanitary officials. Nor can the results of their efforts be urged in excuse for such unnecessary intrusion. A candid review of the effort to regulate tenement houses in London, or the social evil in St. Louis, is sufficient to show the utter failure of such official intermeddling. To get at the facts in such matters, it is necessary, however, to seek information from other sources than the proverbially one-sided and self-laudatory official documents. Poverty constitutes no valid reason for interference with the domestic affairs of people. The instincts of even the poorest classes prompt them, like other people, to live in houses as convenient and as healthful as they can afford. Compulsory sanitation only creates additional expense. which drives the poor into still poorer quarters, so that they cannot be helped in that way. The only method that has thus far proved successful in every sense of the word, is the method of private benevolence in the way of disseminating advice and the means of moral improvement among the lower classes. No amount of legislation will ever reach the difficulty; but every increase of knowledge, and every advance in moral evolution, will proportionately relieve these difficulties, without the aid of civil law.

It is frequently stated that the poor should be protected by the government against the causes of disease which are said to infest the habitation of the lower classes. It is true that certain diseases are more often encountered among the poor than among the rich, but the reverse of the proposition is also true. Every class of people has to contend with its own peculiar difficulties; and if it is right for the government to assume the special protection of any one class, there is no reason why it should not equally assume the protection of all. But the intelligent and energetic members of society prefer to provide for themselves in all the ordinary exigencies of life. It is the lazy people and their sentimental friends who are always calling for government aid. If now you undertake to protect this fraction of the community, you have to protect it against the consequences of idleness, luxury, intemperance and vice — thus interfering with the operation of the wholesome monitory laws of nature; and you do it at the expense of the meritorious classes of society. Having thus accustomed such worthless people to rely upon the government for protection against small-pox, and scarlet fever, and syphilis, and diphtheria, and sewer-gas, and scabies, it will not need the passage of many generations before they will demand protection by the government against the cold and hunger and nakedness for which they should themselves make provision. They will even demand to be washed at the public expense; and they will have no trouble in finding some demagogue ready to tax me heavily, that he may enjoy the advantage of running a free bath-house for the comfort of ragamuffins and black-legs whose only merit consists in their ability to handle a ballot on election days. It is even proposed to dignify such robbery by the name of *solicitude for the public health!*

This is the way in which Communists are produced; and a government which adopts the protective policy may thank itself alone for the growth of Communism and Socialism among its citizens.

The only wise course for society to adopt in relation to the evils which weigh upon different classes of people, is to undertake their relief by private benevolence. An organized distribution of private charity, combined with a similar diffusion of scientific information and moral education, among the ignorant classes who form the extremes of society, would accomplish far better results than can ever be effected by the largest army of politico-sanitary officials. A comparison of the work done by a philanthropic organization, like the Chicago Relief and Aid Society, with the mysterious performances of the County Agent, will sufficiently illustrate this point.

The only remaining portion of the report which demands notice is the section which treats specifically of tenement-houses. These are arbitrarily defined as dwellings in which more than three families keep house independently. The Commissioner finds this an almost unlimited "field of sanitary work." Finding no legal authority "to order the vacation of uninhabitable buildings, and to refuse to let them be again occupied until placed in proper sanitary condition," he has availed himself of the provisions of the following legislative enactment of March 9th, 1867: "In case the sanitary condition of the city should be of such a character as to warrant it, it shall be the duty of the Commissioner of Health to take such measures, and to do and order, and cause to be done, such acts for the preservation of the public health (though not herein or elsewhere or otherwise authorized) as he may in good faith declare the public safety and health to demand."

Taking this legislative utterance as his authority, he has undertaken to interfere, at his own discretion, with the natural laws of supply and demand which operate in tenement houses as well as everywhere else. This arbitrary assumption of extraordinary powers, for the purpose of dealing with the ordinary conditions of the daily existence of society, has been formally condemned by the highest courts of appeal. In New York the Board of Health sought to justify their analogous action in the matter of night scavenging by an exactly similar appeal to authority which was by law designed to be invoked only during extraordinary emergencies. The case was fully discussed in the courts, and the arbitrary action of the Board of Health was formally condemned by the Court of Appeals (Gregory vs. New York, 40 N. Y. 273). A dim consciousness of error seems to have invaded the mind of our Commissioner, for he goes on to say: "It is true that this act was drawn to meet such emergencies as epidemics may present, but it is also true that these domiciles, without the energetic and vigilant attention of sanitary authority, become nurseries of every form of contagious disease, and of perpetual epidemics, and thus always stand as a great menace to the public safety and health" — all of which, by the way, is a gross exaggeration, which merits the sharpest rebuke.

Here, then, we have a public official openly confessing the commission of one of the crying sins of the age. Having no legal sanction for certain action, he nevertheless goes right on to act in accordance with his own arbitrary notions, and seeks to justify this course of behavior by an appeal to a law which he himself admits was enacted to cover a state of affairs which has at present no existence. That is the Turkish way of carrying on a government, but it is not a civilized mode of proceeding. This readiness to act without authority of law — this fondness for autocratic and mediæval methods of administration — constitutes one of the standing grounds of complaint against our modern sanitary officials. They delight in vague and general legislation which defines little, and leaves almost everything to the discretion of an officer who can throw dust in the eyes of the public by loose talk concerning the exigencies of the public health, whenever he is taken to task for unnecessary acts of despotism. Now such a state of things is all wrong. The conditions of public health are as simple and as capable of clear definition as the conditions of commerce or of agriculture. There is no more need of giving arbitrary powers to a Health Commissioner than there is of giving to a Custom-house officer the privilege of collecting such duties as he may see fit to impose. There is great need of improvement of our sanitary laws in this particular. They have evidently been drawn up with very little knowledge of the proper functions of government, and with a very imperfect comprehension of what should be done, or left undone, by the health officials. Consequently, while very minute in their specification of certain minor duties — such as registration of births and deaths — they are virtually silent about all the higher and more important duties of officers who are charged with the public health. Nothing could be more gratifying to the ordinary politician; nothing more disgusting to the scientist and the philosopher. What we need, in the first place, is a clear understanding of the sphere and legitimate functions of government in general. Then we need a complete definition of the limits which divide the public and common interests of men from their private interests and relations. Finally, we need a thorough recognition of what constitute the ordinary conditions and necessities of a community, and of what are the extraordinary and, so to speak, accidental exigencies of such a society. These elements of the problem are not difficult to define. But when we attempt to adapt legislation to these conditions, it becomes painfully evident that very, very few of our legislators are yet possessed of the knowledge and wisdom and moral sensibility necessary to reach a correct result. Take, for example, such a little trifle as the question whether the highest good of the community will be secured by placing warning cards upon infected houses, as was anciently done in epidemics of the plague, and as we now sometimes do in scarlet fever. The ordinary sanitarian, who thinks only of the avoidance of a *contagium*, jumps at once very naturally to the conclusion that a warning card and a stringent quarantine will accomplish the best possible result. But when we examine the subject calmly, in accordance with the clearest light that radiates from the triune source of science, philosophy and moral law, we find that the first thought of the ordinary sanitarian was erroneous, and that the measures founded upon his hasty conclusions not only defeat themselves, but also work positive injury to the human race. This, no doubt, seems like a very startling assertion; and, at the present stage of the evolution of the average of mankind, it will not command anything beyond a very limited acceptation. In fact, we should need the space of an essay for the adequate presentation of the highest scientific thought regarding these subjects. If, however, any person of ordinary cerebral capacity desires to reach a definite and final conclusion regarding these matters, he can do so, but in only one way. He must first thoroughly master the principles of physics, of chemistry, and of physiology. (We may remark, as we go, that this will require something more than a mere recollection of one's slumbers upon the benches of a medical college). He should then carefully read the works of the masters in biology. A complete study and practical knowledge of medical science should then follow. After this the advancing student should endeavor to compass the field of mental and moral philosophy. Then should come an investigation of the principles of law and of government; and lastly, we may conclude with a wide range of historical reading. Thus equipped, it is not difficult to judge of the right or the wrong of any question which may present itself to the sanitary legislator. Such a course of training is by no means beyond the reach of ordinary mortals — it is indeed the possession of a great many comparatively unknown individuals. But the attributes which carry one through such a course of training are not often united with the qualifications which win success in the political arena; consequently, the ordinary sanitarian, having become a sanitarian through the force of political combinations, finds himself incapable of accurate independent determination, based upon knowledge of scientific facts. Like all persons similarly situated, he either abandons himself to the blind guidance of an arbitrary will, or else he stands feebly agape, waiting for the utterances of some little sanitary pope in some distant quarter of the earth. The greater the distance, the greater the authority which, for him, invests such deliverances; hence one of the causes which give such currency to the Asiatic method now so fashionable.

We have dwelt thus at length upon this report, because it embodies nearly all of the fundamental errors which are now current in official circles. These errors are based upon doctrines of which the inaccuracy is well known to the higher circle of scientific men. But knowledge trickles very slowly through the masses of mankind; consequently, we must wait with patience until our sovereigns can learn. Fortunately, however, the general drift is in the direction of progress, and the time will surely come when this little flurry of awakening ignorance will have ceased, and our children will study with amusement the history of the manner in which we had to deal with this attempted revival of exploded ideas from the primitive ages of a barbarous world. The crudity and immaturity of thought which characterizes the half-educated sentimentalists who are running to and fro, disturbing everybody with their old-fashioned whims, is well illustrated by their favorite maxim, "Health is more important than civil liberty." That is, they believe in treating the human race, not like free and intelligent moral beings, but like so many brute cattle, who are to be fed and watered and salted and branded and castrated according to such notions as may be fashionable among the tiny despots who are from time to time endowed with a little brief authority over the uncomplaining herd. That was the universal theory of government during the dark ages; but the more enlightened portions of the world are gradually outgrowing such ignoble ideas

And now, in conclusion, let us not be misunderstood. In all this criticism we have no personal feelings to indulge. We speak only in behalf of true science and good government. While we must denounce error and cant and folly wherever they exist, we should thoroughly believe in sanitary laws, and in a stringent sanitary administration. But the laws must be wise, and their administration must be just. Our officers deserve great credit for much that they have done. For the conclusive manner in which they have demonstrated the impossibility of stamping out scarlet fever; for the splendid energy with which they have desolated Bridgeport; for the scientific way in which they have ventilated the sewers; for the general cleansing of streets and alleys; and for all similar beneficent actions, they deserve the highest praise. It is only when they have allowed themselves to be led astray by fallacies which are fashionable from Berlin to San Francisco, that they have exposed themselves to the shafts of an impartial and scientific criticism. H. M. L.

ARTICLE XVIII. — HABITUAL DRUNKENNESS AND INSANE DRUNKARDS. By Dr. Bucknill, F.R.S., Fellow of the Royal College of Physicians — Late Lord Chancellor's Visitor of Lunatics.

In 1875, Dr. Bucknill visited the United States, and, being interested as a mental physician in drunkenness as one of the great factors of insanity, made numerous inquiries in regard to the results attained in inebriate asylums and homes of this country.

The doctor associated with and interviewed many of our oldest superintendents of institutions for the insane, and visited all the inebriate asylums and homes he could hear of in the Eastern States, except "one small private institution." There is no evidence whatever that has come to the reviewer's notice which shows that Dr. Bucknill was not perfectly honest in all his inquiries, or that they were made with any other purpose than that of eliciting truth. He does not believe in the pernicious doctrine that habitual drunkenness is a disease; therefore he was very severely criticised by those interested in the establishment of that dogma.

Sometime after his return to England — indeed, the following year — in a speech before the Rugby Temperance Association, he took occasion to state his views in regard to intemperance, and expressed his opinions candidly as to the danger of calling habitual drunkenness a disease. He also spoke in unmistakable terms of the direful effects of treating men for a disease which did not exist, by remedies which were not applied.

He says at p. 3, Art. III. that "he believed drunkenness to be a fruitful cause of disease, but not in itself a disease; and he looked upon inebriate asylums as an unfortunate attempt to coddle drunkenness and patch up a wide and fruitful social mischief."

In all his remarks, however, Dr. Bucknill excepts the Franklin Reformatory, of Philadelphia — of which Dr. R. P. Harris is physician — and it should be remembered that he did not visit the Washingtonian Home of Chicago.

Both these institutions have been ignored by the American Association for the Cure of Inebriety, because they refuse to inscribe on their banner, "Intemperance is a Disease."

Concerning the Franklin Home, he says: "This was the only place I saw in America where honest, earnest work was being done, not for the CURE but for the REFORM of inebriates." The doctor was very greatly pleased with the spirit manifested by the inmates of this Home, and expressed the desire to see institutions of this order established in Glasgow and Liverpool.

In regard to the heredity of intemperance, our author speaks with care, and with the evident desire of giving it all the prominence which the facts will justify. I am hopeful that his words will influence some of those who so hastily jump at the conclusion that the appetite for alcohol, in any considerable number of cases, is handed down from a former generation, thus doing away with all personal responsibility in the matter. As a matter of fact, many of those whose reformation is the most easily accomplished, and the most perfect as regards time, are those whose ancestors, for two generations back, have been addicted to the habitual use of alcoholics; while on the other hand some of the most incorrigible — those who, after repeated admissions, and upon whom months of personal labor have been bestowed to insure a reformation, relapse immediately into their former habits — come from a stock perfectly free from the use of stimulants.

At p. 34 is found the following: "I am inclined to think that heredity from intemperance is a less important factor of insane drunkenness than it is generally supposed to be;" and still further he says: "However influential in the conduct of life a truth may be, however wholesome its full force, it is morally wrong and practically mischievous for it to be overstated, which I fear has been done with regard to the heredity of drunkenness. Moreover, if it be admitted that the tendency to drink is transmitted from one generation to another, and that the children's teeth are set on edge because the parents have eaten sour grapes, it does not prove that such an inherited tendency is morbid, for vice also is heritable."

We have here a book which every man and woman interested in the great work of reforming inebriates, should read. Doctors, lawyers and clergymen should read it. Above all, editors, philanthropists and temperance lecturers should buy a copy.

The work contains 100 pages, and is the best argument yet published against that pernicious dogma, that "drunkenness is a disease."

It shows with clearness and conclusion that reformation is something more than "leading for a brief time a life of indolent luxury, under a cloud of constant tobacco-smoke, with cards and billiards," and being impressed at the same time that they (men addicted to habitual drunkenness) are "interesting but helpless objects of social and psychological science."

Since 1873 (*Medical Examiner*, Chicago), the writer of this review has advocated the theories now so ably given to the public by Dr. Bucknill, and it is to be earnestly hoped that the time is not distant when every right-thinking and right-feeling individual will use his influence against the mischievous doctrines promulgated by many so-called reformers, but which are so fully exploded in the pages reviewed. C. W. E.

ARTICLE XIX. — DEMONSTRATIONS OF ANATOMY; BEING A GUIDE TO THE KNOWLEDGE OF THE HUMAN BODY BY DISSECTION. By George Viner Ellis. From the eighth English edition; pp. 716. Philadelphia: H. C. Lea.

This is the latest edition of a work well known in this country as well as in England. It is exactly what it purports to be — not a comprehensive manual of anatomy, but a practical guide for the worker, containing full and explicit directions, equally valuable to the novice or the advanced student. Inasmuch as it covers the same ground as Holden's somewhat less pretentious work, it is natural to compare the two. While hardly more practical, it is more full, containing probably the equivalent of two hundred pages of matter more than the latter.

If we complain at all, it must be of the illustrations in which reference is made to different parts by letters or figures, necessitating more time and possible confusion in identification, and being rather wearisome to the eyes. While some of the woodcuts are rather crude, a good feature of the work is the repetition of the same cut to avoid turning back a number of pages.

On the whole, we commend the work as probably the most complete of its kind in our language, adapted to the needs of all, but containing for the average student, perhaps, an embarrassment of riches. R. P.

ARTICLE XX. — A PRACTICAL TREATISE ON SURGICAL DIAGNOSIS. By Ambrose L. Ranney, A.M., M.D.; pp. 386. New York: Wm. Wood & Co.

The general impression left after examining this work is favorable. We hold that the general form in which the salient points of different affections can be best comprehended and contrasted, is the one which the author has adopted. There is nothing strikingly original about the work, nor can it supply the place of larger treatises on surgery, but it certainly sets forth what it pretends to in a most admirable way. Not only are points of dissimilarity arranged in the most approved and intelligible way, but a marked feature of the work is the constant mention of "symptoms in common."

Whatever faults the work may contain are faults of omission mostly; though we are inclined to think that more space is given to the consideration of talipes than is necessary. In considering lesions about the hip-joint, we find no mention of the altered triangle formed by imaginary lines between the spine of the pubis, the anterior superior spine of the ilium, and the trochanter major — which seems an important oversight.

The nature of the work requires some repetition; but on the whole we are at a loss to see how more information could have been condensed in fewer words. While it is not complete, nor yet perfect in its present appearance, we regard it as a most valuable work, which ought to be found in every medical library.

R. P.

ARTICLE XXI. — GENERAL SURGICAL PATHOLOGY AND THERAPEUTICS, IN FIFTY-ONE LECTURES. By DR. THEODOR BILLROTH, Prof. of Surgery in Vienna. Translated from the fourth German edition with the special permission of the author, and revised from the eighth edition, by CHARLES E. HACKLEY, A.M., M.D., Physician to the New York Hospital, etc., etc. D. Appleton & Co., 1879.

This purports to be a revised edition of Dr. Hackley's translation of the fourth German edition of Billroth's Surgical Pathology; a work now too well and too favorably known to require more than a passing notice. The practical value of the "revision" is naturally lessened by the fact that much of the added matter is in the form of an "appendix," so that the reader is constantly annoyed by being obliged to fit little slices of matter into their appropriate places in the body of the book. The work is abundantly illustrated by wood cuts, most of which are conspicuously poor and coarse. If anything more absurdly impossible in the way of illustrative "diagrams" are to be found in any book printed within the last century, or if there are any "illustrations" in existence which more perfectly "illustrate" what "illustrations" should not be, than figs. 1, 2, 3, 4, 6 and 39 (which we cite as specimens merely), we have not chanced to see them. They remind me of the auction placards which adorn our fences and which are themselves adorned by amateur efforts in landscape gardening. But in spite of these faults, which ought to be corrected in the next "revision," Prof. Billroth's work is fairly entitled to be regarded as standard upon questions of surgical pathology. I. N. D.

ARTICLE XXII. — ELEMENTS OF COMPARATIVE ANATOMY. By Carl Gegenbaur, Professor of Anatomy and Director of the Anatomical Institute at Heidelberg. Translated by F. Jeffrey Bell, B.A., Magdalen College, Oxford. The translation revised and a preface written by E. Ray Lankester, M.A., F.R.S., etc., etc. London: Macmillan & Co., 1878.

We are compelled, both by want of space and want of time, to forego the pleasure of carefully reviewing this most excellent manual of comparative anatomy.

Perhaps the greatest merit of Prof. Gegenbaur's work consists in this — that "the comparative method is put prominently forward as the guiding principle in the treatment of the result of anatomical investigation," and this explains the real value of the study of comparative anatomy to the student of medicine.

We hope the time is not far distant when a course of practical lessons in comparative anatomy will take the place of the routine lectures on anatomy in the summer courses of instruction in our medical colleges. I. N. D.

ARTICLE XXIII. — AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. Henry Green, M.D. Third American Edition. Philadelphia: H. C. Lea.

We are glad to welcome a new edition of this excellent manual of pathology. The work of revision has been carefully and thoroughly done. No student can afford or ought to be allowed to graduate without at least reading some work which embodies the essential doctrines of pathology; and we know of no work which so fully meets the wants of the student and young practitioner. It is unfortunate that this author cannot, or does not, write a better chapter on the "cell," but he will probably get to it in the next edition. I. N. D.

ARTICLE XXIV.—PATHOLOGICAL REPORT OF THE MONTREAL GENERAL HOSPITAL, FOR THE YEAR ENDING MAY 1, 1877. BY WILLIAM OSTLER, M.D., of McGill Univeristy. Volume I. Montreal: Davison Brothers, 1878.

This little book of ninety-seven pages includes records of one hundred post mortem examinations, made in the "Montreal General Hospital." Dr. Ostler has the faculty of describing post mortem appearances clearly and tersely, and it is refreshing to get hold of a report of hospital work which is not burdened with wearisome details of "treatment" with which pathological reports are so often embarrassed. I. N. D.

BOOKS AND PAMPHLETS RECEIVED.

Manual of the Principles and Practice of Operative Surgery. By Stephen Smith, A.M., M.D. Cl., pp. 689; 1879. Boston: Houghton, Osgood & Co.

A Clinical Treatise on the Diseases of the Nervous System. By M. Rosenthal; with preface by Professor Charcot. Translated from the author's revised and enlarged edition by L. Putzel, M.D. Cl., pp. 278; 1879. New York: Wm. Wood & Co. Chicago: W. T. Keener.

Transactions of the Medical Society of the State of Tennessee, at its Forty-sixth Annual Meeting, 1879.

Posture as a Means of Relief in Strangulated and Incarcerated Hernia, with a General Consideration of the Mechanism of Reduction. By F. H. Hamilton, A.M., M.D. Reprint from *Hospital Gazette*, June 7, 1879.

An Account of the Perineosinnexereenatur—A New Instrument for the Exploration of Sinuses, especially adapted to Gynæcological Practice. By Jacques Robinson, A.M., M.D. Reprint from *Louisville Med. News*, May 13, 1879.

Observations on Amphoric Respiration and Amphoric Respiratory Echo. By M. L. James, M.D.

The Treatment of Epithelioma of the Cervix Uteri. By J. Marion Sims, M.D. Reprint from *Amer. Jour. of Obstetrics and Diseases of Children*, July, 1879.

Twelfth Biennial Report of the Trustees, Superintendent and Treasurer of the Tennessee Hospital for Insane, Jan. 8, 1879.

Medical Heroism of 1878. By J. W. Singleton, M.D. Reprint from *St. Louis Medical and Surgical Journal*, June, 1879.

Chronic Spasmodic Stricture or Urethrismus. Second paper in reply to Dr. H. B. Sands. By F. N. Otis, M.D. Reprint from *Hospital Gazette*, June 28, 1879.

Early Medical Chicago. By J. N. Hyde, A.M., M.D.

Minutes of Medical Society of the County of New York, 1806–1878. Edited by A. E. M. Purdy, M.D. July; Part IV.

Retroversion in Relation to Laceration of the Cervix Uteri, etc. By Nathan Bozeman, M.D. Reprint from Vol. III, Gynæcological Trans., 1879.

History of the Discovery of Anæsthesia. By J. M. Sims, M.D., LL.D. From *Virg. Med. Monthly*, May, 1879.

Reflex Cerebral Hyperæmia. By C. H. Hughes, M.D. Reprint from *St. Louis Med. and Surg. Jour.*

Pure Rubber Martin Bandages. Reprint from *Chic. Med. Jour. and Ex.*, Aug., 1879.

YELLOW FEVER. — This disease continues its steady progress in Memphis, and develops here and there a case in smaller country places, just as though it was deliberately showing its contempt for all the quarantines, disinfectants, fumigations and isolations, that the advocate of *germ theories* can invent. So too, in New Orleans, cases of the disease occur sporadically once in a few days just as has always been the case in seasons when the epidemic influence was not strong and in the same parts of the city. How much longer will it take the profession to learn that the best disinfectant is pure air, and the best antidote for epidemics, pure air, pure water, cleanliness of person, premises and soil?

KENTUCKY-LOUISVILLE MEDICAL COLLEGES. — These two schools, for many years claiming to be distinct and under separate charters, but run by one faculty and in one building, have finally discontinued their suspicious relationship, and hereafter each will have its own faculty and building.

Summary.

Collaborators :

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY.

PRACTICAL MEDICINE.

TUBERCULAR IRITIS.—(*LaFrance Médicale*), July 12, 1879. A patient was presented to the "Societé de Chirurgie," of Paris, by Mr. Parinaud suffering from primitive tuberculosis of the eye. There was but one opinion on the question of diagnosis. The patient was a child of twelve years, strumous; the father died five weeks previously, and the affection of the eye is referred to the same date.

The cornea presented a whitish and soft appearance over the whole inferior half. In the lower part of the iris was discernable a rose-colored tumor from which emanated other smaller tumors. In the upper part of the iris were two other tumors. By the aid of oblique illumination other little projections were noticeable, which resemble the granulations of tuberculosis, and situated near the border of the pupil. The lesions resemble hypopyon. The softening of the cornea only affected the posterior layers of the cornea. The anterior layers perfectly transparent. The fundus of the eye could not be seen which rendered the existence of deeper lesions probable. The disease displayed no marked activity.

The affected eye—the left—was wholly insensible to light. The right eye was normal. The general health was not perceptibly changed. It was not possible to discover the presence of tubercle in any other organ. No reason whatever to suspect inherited syphilis.

The question of treatment was what elicited the discussion. To prevent a general tuberculosis, as the affection was supposed to be confined to the eye, the enucleation of the ball was advocated by Messrs. Th. Auger, Giraud, Teulon, Le Fort. Mr. Verneuil and others opposed the idea of enucleation from the fact that cretification sometimes takes place in tubercular deposits, and from the possibility of an operation exciting the disease to greater activity.

HEREDITARY SYPHILIS.

BY DR. J. N. HYDE.

VACCINO-SYPHILIS; OR, THE ACCIDENTAL TRANSMISSION OF SYPHILIS BY VACCINE LYMPH.—(*Med. Press and Circular*, Ap. 9, 1879, p. 279.)

Dr. Hugh Thomson's communication to the Glasgow Medico-Chirurgical Society commences with the promise of an interesting and valuable contribution to his subject, but continues and concludes with a disappointment. As the writer had never seen a case of vaccino-syphilis, his brief review of the literature of the subject is succeeded by an extended reference to the cases reported by Mr. Hutchinson and portrayed in the "Clinical Illustrations" of that author. Dr. Thomson, referring to the demonstration by Keber, of Dantzig, that "even clear vaccine lymph contains pus and blood corpuscles," suggests that to transmit syphilis from a vaccinifer, the presence in the lymph of visible blood globules is not requisite. The views of Seaton and DePaul are adduced in favor of the possibility of greater peril in vaccinations made after the exhaustion of the first and freshest lymph supply in the arm of any given vaccinifer, Thomson calling attention to the somewhat remarkable fact that in the Italian epidemics of syphilis, the same child was taxed for a supply of lymph sufficient to vaccinate fifty, sixty and even a hundred other children. The practical rules which the general consideration of the subject should suggest are: (*a.*) From a single vaccinifer, not more than ten or twelve persons should be vaccinated. (*b.*) The vaccinifer should, whenever possible, be more than four months old, that the period in which hereditary syphilis most commonly is displayed, may have elapsed. (*c.*) When in doubt regarding the immunity of the vaccinifer, always reject the lymph, not waiting for proof of syphilis.

Dr. Thomson concludes as follows: "I have said nothing of another method of avoiding syphilitic infection in vaccination, one which may be said to afford absolute security against it, viz., *animal vaccination*, or the employment of the calf or heifer only as vaccinifers. The reason is, that the drawbacks connected with such a mode of vaccinating are so great, though of a different sort, as so far to outweigh the small, it may be said infinitesimal, advantage it may have in respect to syphilis, that it is never likely to be adopted on a large scale in this country."

SYPHILIS BY VACCINATION WITH HUMAN VIRUS. — (*Gaz. des Hôpitaux — Tol. Med. and Surg. Jour.*, Mar., 1879, p. 125.)

Virus was taken from the seven-months-old child of a mother subsequently known to be syphilitic, the infant at the time presenting all the appearances of perfect health. With the virus thus obtained, twenty-five girls were vaccinated, twelve of whom in six weeks had ulcerations at the point of inoculation, succeeded by exanthem, oral and pharyngeal ulcers, anal condylomata, syphilitic ozæna, etc. Three others had suspicious lesions in the neighborhood of the vaccine sore, which were not followed by constitutional symptoms.

INFECTION OF A NURSE BY HER NURSLING. — (*Gazette Obstét.*, Ap. 5, 1879, p. 103.)

Dr. Guillery had under observation a woman with conjunctivitis, abscess near the lachrymal sac, inguinal adenopathy, and syphilitic "lichen" over the surface of the thighs and chest. When her own infant was fifteen months old, she concluded to nurse another child, and, being examined by a physician, was pronounced healthy.

The infant delivered to her charge was one month old, feeble and sickly in appearance, had a copious eruption over the thighs and legs, and fissures of the mouth and anus. It seized the breast with difficulty, on account of the habitual obstruction of the nasal fossæ. In fifteen days, the nurse found that she had fissure of the nipple. In two months the child died, but, towards the end of the first month, the nurse discovered a macular eruption upon the surface of the chest. Meantime she had not ceased to suckle her own child as well as the stranger; the former enjoyed health up to the time of the death of the latter, when the mother noticed that it displayed an exanthem over the body, and suffered from a conjunctivitis not unlike her own. These accidents on the part of the nurse's own child were eventually recognized as fortuitous; the infant was, in short, free from the disease.

The inferences Guillery seems to draw from these facts are certainly not those which an expert would consider warrantable. A simple fissure of a nurse's nipple coming in contact with the secreting lesions of the mouth of a syphilitic infant, and becoming thus the portal of infection, must of necessity be transformed into the primary manifestations of the infectious disease. Nor is it safe to decide that such transformation has not occurred because "chancres were not seen in that locality." Much less can it be thought possible that absorption of a virus could happen at the site of such fissures and the result be a species of so-called "syphilis d'emblée." Neither is it generally to be concluded that when papular syphilides exist upon the surface of the body, the most abundant crop will occur in the regions nearest to the site of inoculation. Such a manifestation must, in any case, be regarded as quite fortuitous.

ACQUIRED INFANTILE SYPHILIS. — ("De la Syphilis Infantile Acquise," par le Dr. Alfred Pontet; Paris, Delahaye, 1878.)

Pontet, in the consideration of his subject, devotes special attention to the questions regarding etiology and diagnosis. Under the title of "Accidental Syphilis," he considers the results of contact with the nipple and breast, vaccination, infection by the medium of toilet articles, and contagion where there is ignorance. Under the title of "Intentional Syphilis" are classed those cases which seem to result from a deplorable superstition, existing only in France, whereby it results that a female infant is infected directly from an adult. Syphilis may, however. be intentionally communicated from other motives.

In proof of the communication of syphilis, two circumstances require consideration before arriving at a diagnosis: 1st, the existence of an indurated chancre, it matters not in what region of the body; 2d, the traces of a traumatism, more or less violent, with or without rupture of the hymen. The author is inclined to believe that tertiary manifestations are rare as the result of acquired infantile syphilis, the disease in such cases attacking organs which are in the phase of evolution, and which with greater readiness admit of its modification or elimination.

HEREDITARY TRANSMISSION OF SYPHILIS. — (*Brit. Med. Jour.*, April 26th, 1879, p. 631.)

In Mr. Milton's case, a father was supposed cured before marriage, but had, nevertheless, the first-born dead; the second, a child healthy save for a slight eruption; the third, without any symptoms of disease; the fourth, distinctly syphilitic.

HEREDITARY BONE-SYPHILIS, MULTIPLE FRACTURES AND PSEUDO-PARALYSIS. — (*Cbl. f. Chir.*, No. 4, 1879; from *Bull. de la Soc. de Chir.*)

Polaillon reports the case of a woman, 21 years old, who had flat condylomata in the second month of pregnancy, and gave birth to a child at full term. This child had fracture of the left humerus and paresis of the right arm and lower extremities. The bones about the elbows and the entire left femur were thickened, and painful on pressure. There was no other external sign of syphilis. The child died in eight days of intestinal catarrh. *Post-mortem*, there was found fracture of the humerus and dislocation of the upper fragments without the formation of callus, though there was periosteal thickening. The right humerus was fractured at the same point without periosteal lesion and dislocation. Both fractures were respectively nine and eleven millimeters from the epiphyseal cartilage. The right femur was one-half centimeter longer than the left. The latter was of decidedly smaller volume in several places. There was a transverse fracture of the left femur without dislocation, about five centimeters below the epiphyseal cartilage. In the right femur there was a fracture near the upper end. Various enlargements were found on the other bones, with porotic condition in places. The fractures were considered as intra-uterine and not post-partum, in consequence of the evidences of inflammation.

THERAPEUTICS.

CHOLAGOGUES.—(*Br. Med. Jour.*, Feb. 8., '79.)

For some time a commission, with Dr. Rutherford, of Edinburg at its head, has been investigating the biliary secretion of the dog, with reference to the action of cholagogues. Having at last found itself able to give a summary of results, we give a few of its conclusions concerning the actions of well known remedies, calling attention, however to the fact that they were obtained on dogs, and may not be exactly similar with the human race.

Podophyllin, aloes, rheum, euonymin, sanguinarin, iridin, leptandrin, colocynth, jalap, sodium phosphate, mercuric chloride, phytolaccin, hydrastin, juglandin, sodium and ammonium benzoate, benzoic acid, sodium salicylate and nitro-muriatic acid, all are more or less powerful hepatic stimulants, positively increasing the amount of bile secreted, and all except the last five being more or less stimulant or irritating to the intestinal glands. Senna, colchicum, taraxacum and scammony are but feeble hepatic stimulants. Gamboge, castor oil and calomel stimulate the intestinal glands, but not the liver. Ipecacuanha is simply a hepatic stimulant. Magnesium sulphate is only stimulant to the intestines, as are also ammonium chloride and menispermin.

Calabar bean stimulates the liver, and atropia antagonizes this action, but atropia given alone does not affect the secretion of bile.

The authors have also found, in man, four grains of iridin, at night, a certain remedy for "biliousness." Euonymin, in two grain doses, also has the same effect. Both are liable to be followed by depression, if the dose be too large, and both should be followed by a saline aperient in the morning.

Items.

AMERICAN PUBLIC HEALTH ASSOCIATION. — As it may interest some of our readers, we insert the following notice [ED.]:

To Members of the American Public Health Association:

GENTLEMEN: — At a meeting of the Executive Committee, held in Washington, January 3, 1879, it was decided that the principal subject for discussion at the next annual meeting of the Association, to be held in Nashville, Tenn., 18th–21st November, shall be the sanitary condition of cities and towns, especially those of the Southern States.

In selecting a subject of so wide a scope, the committee considers that it will be expedient, if not indeed indispensible to the attainment of useful results, to limit the inquiry to certain specified branches of the general subject rather than to attempt to cover the entire ground of city sanitation.

A few years ago a committee appointed by the Association prepared a series of elaborate schedules of questions for facilitating such an inquiry, which have been recently published in pamphlet form as Circular No. 2, of the National Board of Health. A copy of this pamphlet will be furnished to any member of the Association who desires to take a part in the proposed discussion, on application to Dr. T. J. Turner, secretary of the National Board of Health and a member of the Executive Committee of this Association. His address is "Office National Board of Health, Washington, D. C."

The Executive Committee recommends the following subjects of inquiry: Water Supply, schedule C; Drainage and Sewerage, schedule D; Disposal of Garbage and Excreta, schedule H; Slaughter Houses and Abattoirs, schedule K; Public School

Buildings, schedule M; Public Health Laws, Regulations, etc., schedule R; Expenses of Municipal Sanitation, schedule U.

Attention is also called to the following resolution presented by Dr. A. Gihon, U. S. N., at the last annual meeting:

"Resolved, that the Executive Committee be directed to provide for the investigation and discussion at the next annual meeting, of the most effective means for preventing the spread of venereal disease."

Members who propose to consider these subjects, or who may desire to treat exhaustively some special subject of their own selection, are invited to prepare papers not to require more than thirty minutes in reading, and to forward titles and abstracts in accordance with Sec. VIII of the Constitution.

J. L. CABELL,
President American Public Health Association,
and Chairman of Executive Committee.

UNIVERSITY OF VIRGINIA,
CHARLOTTESVILLE, Aug. 15, 1879.

EDUCATIONAL PROGRESS. — The *Medical Record*, of New York, for August 23d, says: "In accordance with a long cherished plan, the medical department of Yale College announces a graded course of instruction extending over three years." A fair standard of preliminary education is also required before admission. Thus the good work progresses. But when will the *Medical Record* announce that the New York medical schools have followed so good an example?

PROF. WM. H. BYFORD, M.D., has just returned from Europe. He went abroad to read a paper, by special invitation, before the British Medical Association, at Cork. He selected as his subject, "The Action of Ergot in Intra-Uterine Fibroids."

PROF. JAS. NEVINS HYDE, M.D., is absent from the city, attending a meeting of the American Dermatological Society, and in the next number of the JOURNAL will doubtless give our readers the benefit of his visit.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Sept. 1 and 15.
West Chicago Medical Society—Mondays, Sept. 8 and 22.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.

Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.

Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.

Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.

Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.

Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.

Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.

Woman's Medical College—11 a. m., Ophthalmological by, Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

CHICAGO MEDICAL

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[In these pages dimension and weight are expressed in terms of the Metric System, and temperature in degrees of the Centigrade Scale.]

Original Communications.

ARTICLE I.

ERGOT IN THE TREATMENT OF FIBROID TUMORS OF THE UTERUS. By W. H. BYFORD, A.M., M.D., Prof. of Gynæcology in Rush Medical College. Read before the Obstetric Section of the British Medical Association.

As an introduction to my paper, I submit the following propositions: 1st, When properly administered, ergot frequently very greatly ameliorates some of the troublesome and even dangerous symptoms of fibroid tumors of the uterus, *e. g.*, hæmorrhage and copious leucorrhœa; 2d, it often arrests their growth and checks hæmorrhage; 3d, in many instances it causes the absorption of the tumor, occasionally without giving the patient any inconvenience, at other times the removal of the tumor by absorption is attended by painful contractions and tenderness of the uterus; 4th, by inducing uterine contraction it causes the expulsion of the polypoid variety of the submucous tumor; 5th, in the same way it causes the disruption and discharge of the intramural tumor.

There are many cases on record to substantiate every one of these propositions.

From what I consider well-authenticated sources, including the cases under my own observation and in the practice of my friends and neighbors, I have collected one hundred and thirty-six cases of fibroid tumors treated by ergot. Of these, twenty-five cases were cured without giving the patient any inconvenience from painful contractions. In forty-six cases the tumors were diminished in size and the hæmorrhage was cured. In twenty-seven others the hæmorrhagic symptom was relieved, while the size of the tumor was not affected. In eight other instances the tumors were broken to pieces and expelled piece-meal.

For examples of cases in which the first conditions obtained, I would refer to those cured by Hildebrandt; of the other examples, four were reported to me by Dr. S. P. White, of Buffalo, U. S., one by the late Dr. Hodder, of Canada, and Dr. Jukes each, and eleven occurred among my immediate acquaintance and in my own practice.

Among those in which the hæmorrhage was cured and a diminution of the tumor took place, eleven occurred to Hildebrandt, two to Chrobak, five to White, of Buffalo, and the remainder to gentlemen upon whose veracity I have implicit reliance. The most remarkable case of which I have any knowledge was reported to me by the late Dr. G. C. Goodrich, of Minneapolis, U. S., in which absorption of a large tumor took place under the administration of ergot and belladonna. I subjoin his description:

"The treatment was commenced in 1870, and continued two years. The uterus filled the whole space between the ilia, and measured in the transverse diameter thirty ctm., and in the vertical forty-eight ctm., extended up under the ensiform cartilage and close up to the margin of the cartilages of the ribs. The treatment was followed by cramps in the uterus, which produced a wild enthusiasm in the mind of the patient, and inspired her with strong hopes of recovery. Without consulting me, she doubled the dose of medicine, which was administered internally, and as a consequence she was attacked with very strong uterine contractions and symptoms of metritis. This caused me to abandon treatment for about one month, and had it not been for the urgent determination of the patient, I would not have resumed it. She insisted that as this was the first medicine which had ever affected the enlarged organ, she believed it would cure her, and promised to obey my directions if I would proceed. She so promptly and rapidly improved that I doubted if it were not a coincidence with, rather than a consequence of, the treatment. Prompted by this doubt, I abandoned the use of the ergot and belladonna, and continued alterative treatment. The patient soon assured me that she no longer felt the griping pains caused by the remedy, and that the tumor was softer and larger than when she took the ergot prescription. The ergot and belladonna were again resumed, and in four months she was able to make a trip to Boston alone. While absent, she continued to take the medicine. From this time she continued rapidly convalescing, and is now in the enjoyment of fine health."*

I subjoin two cases in which the tumors were expelled piecemeal, under the administration of ergot, which came under my own observation:

Mrs. Arthur King, of Sterling, Illinois, called on me December 13, 1875. She was thirty-five years old, married, and had never been pregnant.

On the first of the preceding June she noticed a circumscribed hard lump two inches below, and to the left of the umbilicus. She was the subject of serious uterine and sympathetic symptoms, for which she had at different times had treatment. She had profuse menorrhagia, leucorrhœa, and great sense of weight in the pelvis.

Upon examination, I found a hard, round, movable tumor, extending up to within five ctm. of the umbilicus, filling up the whole of the right iliac, the hypogastric, lower half of the umbilical, and more than half of the left iliac regions.

The contour of the tumor was somewhat uneven, though not distinctly nodular. The cervix was long, pointed, and thrown backward and to the left. The sound entered the small uterine mouth and passed upward, backward, and to the left fourteen centimetres.

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* The author's address before the Am. Med. Association, at its meeting in 1875.

The diagnosis was a fibrous tumor of the right anterior wall of the uterus. I prescribed thirty drops of Squibb's fluid extract of ergot to be taken three times a day. She went home, but did not commence taking the medicine until the 20th of December. On the 26th of December Dr. J. B. Crandall was called to see her, and describes her condition as follows: "The patient was in a state of great nervous prostration, and worn out by severe pain and loss of sleep. The pains commenced soon after taking the second dose of ergot, and were excruciatingly severe for about three hours, after which they continued less severely for two days and nights. She had more or less hæmorrhage from the uterus after taking the ergot. Her pulse was feeble, 110 to 120 to the minute. The skin was hot and dry, and she complained of great pain and tenderness over the uterus and lower bowels. The feet were drawn up, and the face wore a pinched and peculiar expression."

Under these circumstances, the doctor administered anodynes, tonics and nourishment, to the great relief of the patient.

On January 11, 1876, the patient began to pass from the vagina small masses of fibrous substance, from the size of a chestnut to that of an English walnut. The substances thus discharged were firm, and gray in color, and were exceedingly fetid. This discharge continued up to the 21st of January, when the uterus was very much diminished in size, the tenderness had subsided, and the patient appeared comparatively comfortable. Up to that time she had taken but three doses of ergot — on the 20th of the preceding month — and the doctor ordered it to be resumed again. This time the ergot produced no pain, and after three or four days was discontinued. From the 21st of January there were no more pieces discharged, but up to February 1st a yellowish, thin, offensive fluid passed from the vagina in considerable quantities. On the first day of February the ergot was again ordered and continued two weeks, when, as no results ensued, it was finally dropped.

Dr. C. states that on the 14th of February the uterus was reduced to its normal size, and on the 26th the patient was up and about her work, completely cured. He remarked, in this connection, that the first three doses of ergot taken by the patient were the cause of her recovery.

This case is published in the August (1875) number of the CHICAGO MEDICAL JOURNAL AND EXAMINER, as reported by Dr. Crandall.

Mrs. L. D. M., age 47 years, had a fibroid tumor in the anterior wall of the uterus, which, with the enlarged uterus, arose to within five ctm. of the umbilicus.

She commenced taking thirty drops of the fluid extract of ergot on the 22d of September, 1876, and was to increase gradually the dose with the object in view of causing the disruption and expulsion of the tumor. The ergot at first produced no perceptible effect, until she had taken it ten days, when she began to experience the pain of contraction. The pain became so severe and continuous that it was necessary to omit it for two or three days at a time. The patient was intelligent and understood the object and mode of action of the ergot, and when the pain entirely subsided, she courageously resumed it in the smaller doses, and increased again until the pains became intolerable. On the 18th of January, 1877, small pieces of the tumor showed themselves in the vaginal discharges, and by the 26th of the same month the whole of it had been discharged piece-meal.

She wrote me on the 30th of January, saying, "I think I wrote one week ago to-day. At that time the tumor was passing. It continued to pass until the 26th, when, I think, the last was expelled. To-day I send you by express a portion of the last that came. I think the whole of it including the portion I sent you, would have weighed one and a half pounds. I do not believe a quart can would hold it if the whole had been preserved. It commenced to come on Saturday, and from Saturday evening to Sunday morning, there was a pint or more. After that the stench was so disagreeable that we could not cleanse it; consequently we threw it away. Wednesday and Thursday it seemed to be in one continuous mass. I cannot better describe it than to say that it came like sausage-meat, from a stuffer. I would cut off about four inches a day, that is on Wednesday and Thursday. On Friday morning the last of it came away."

During, and for some days after, the expulsion, she suffered slight symptoms of septicæmia, but recovered from them, and in the course of a month afterward she visited me, when I found the uterus measured six centimetres in depth. She then had some leucorrhœa, but was fast regaining her health. She is now perfectly well, and has passed in safety the menopause.*

I have known eight cases in which the tumors were expelled piece-meal by ergot, with but one death. The death occurred in a patient who rode one hundred and fifty miles on a railroad train to see me, with pieces of the tumor hanging from the vagina, which she would not allow her physician to remove. When she arrived, I passed my fingers up into the contracted capsule and scooped out the remaining portion of the tumor. She was so exhausted, however, by the journey and the sepsis that she died three days afterwards.

I cannot help believing that if she had remained at home and submitted to the treatment of her physician, her life need not have been sacrificed.†

The influence of ergot over the uterus has been a familiar fact to the profession for a long time. It is not long, however, since we were aware of its effects upon the muscular fibers entering into the formation of other organs. We now know that this medicine acts upon the unstriped muscular fiber wherever found, whether in the viscera or in the vessels of the body.

The fibers of the uterine walls, and the arteries supplying them with blood, both belong to this class; this fact in the formation of the uterus renders it particularly susceptible to the action of ergot. This drug acts upon the uterus‡ in a threefold manner, and causes a diminished flow of blood to the morbid as well as healthy tissues in the uterine structure.

First: the calibre of the arterial tubes is diminished by the contraction of the muscular fibers which enter into their composition. Second: the arterioles are diminished in size by compression from the contraction of the uterine muscular fibers which surround them. Third: these vessels are distorted and drawn in diverse directions by both the contraction and compression, and hence are rendered less fit for sanguineous conduits.

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* This case — the abstract of which I have here given — was published in the May 15th, 1877, No. of the *Archives of Clinical Surgery*, N. Y.

† This case was published in the May 15th, 1877, No. of the *Archives of Clinical Surgery*, New York.

‡ From the author's address before the Am. Med. Association, 1875.

Another consideration of prime importance is that, under the influence of these medicines, the nutrition of fibrous tumors is interfered with, not only from diminution of blood in their tissues, but also from compression of their substance by the proper fibers of the uterus, and are therefore made more susceptible to the process of disintegration and absorption.

The great influence exerted by ergot over the circulation of the uterus is rendered more efficacious in the removal of fibroid tumors of that organ, because of the peculiar organization of the growths. It is now pretty well understood that this neoplasm is not very generously supplied with arterial blood, and that its supply is derived from numerous minute vessels instead of one or two of larger caliber. From these circumstances it results that its vitality is very low, its circulation easily disturbed, and consequently its nutrition impaired.

I think we are justified from observation in assuming that the action of ergot may be graded from an almost imperceptible to a very intense degree. Probably the first degree effects the vascular supply; the second, in addition to this, causes so much contraction as to merely render the fibers tense without causing pain; and the third prompts the uterine fibers to vigorous and painful contraction.

This inference is plainly deducible, I think, from the several modes by which tumors are made to disappear under its action, as well as from direct observation of the uterine fibers.

Before going further, I desire to allude briefly to the relations of fibroid tumors to the different strata of the muscular fibers of the uterus. We use the terms *submucous*, *intramural* and *subserous*, as expressive of this relation. These terms are too vague to carry with them a correct idea of the facts, without some explanation. *All fibroid* tumors of the uterus have their origin in the wall of that organ. Some arise immediately in contact with the mucous membrane, and, as they grow, become pediculated and hang in the uterine cavity. Others commence their growth beneath a very thin layer of fibers. They very soon overcome the resistance of the attenuated stratum, and pushing it and the mucous membrane before it, become pediculated later in their growth.

If, however, they are deeper in the wall, but between the central layer of its fibers and the mucous membrane, their bulk gradually encroaches upon the interior of the uterus, forming broad tumors that fill the cavity of the organ.

These are not attached to, but developed *in* the wall of the uterus. These are all submucous tumors, but in professional language the two first are called polypoid, while to the latter the term submucous tumor is given. We designate the tumor that is developed exactly in the central layer of the wall of the uterus, displacing the surrounding tissues alike in every direction, intramural. In point of fact this variety of tumor is very rare, as the fibroid growth much more frequently originates external or internal to the central line of the wall. The subserous tumor varies in its relative distance from the peritoneum in the same manner as the submucous from the lining membrane of the uterus.

I will now venture to call attention especially to the manner of expulsion of the polypoid and submucous intramural varieties. It will be seen from figure No. 1 that when the uterus contracts, all the fibers unite in pressing the polypus through the cervical canal, which is usually already shortened, and rendered dilatable in consequence of its increased vascularity.

The cervical canal dilates, and after more or less painful efforts the polypus is expelled entire, covered by the mucous membrane. This membrane is often in a state of gangrene, but so far as I have observed these cases, the tumor is not broken to pieces.

Figure 2 represents an intramural fibroid between the central line of the uterine wall and the mucous membrane. It is intended to show a tumor where a thin layer of fibers separates it from the mucous membrane, and where a thick and heavy layer is spread over its external hemisphere. Three quarters of the muscular wall are applied to that side of the tumor. If in this position all the fibers of the uterus vigorously contract, the fibers near the mucous membrane must be overcome by the heavy layer outside (at *c*). But the opposite wall plays an important part by supporting the weaker layer at the fundus of the tumor, and adding its own force in overcoming the capsule at (*e*), where it usually gives way. The position of the tumor makes its escape from the concentric action of all the fibers of the uterus impossible, and every one knows that when the resistance is partially overcome, the uterus is stimulated to more vigorous action, and the pains will not abate until the mass is expelled. If not too large, it is driven out without undergoing great laceration, but if its size and attachments are such as to make this impracticable, it will be broken into fragments and expelled piece-meal.

Allow me to supplement the above description by explaining the effect of ergot on the sub-peritoneal and central intramural tumor. In figure 3, we see the disposition of the fibers on the sub-peritoneal variety, next the uterine cavity there is a thick and strong stratum of fibers, while immediately under the peritoneum the layer is very thin and comparatively weak. When the uterus is acting with vigor, the fibers between A and B, will cause those two points to approximate each other, and the tumor will become pediculated; but that is all, for the tumor lays outside the field of concentric action and escapes the crushing influence to which the submucous variety is subjected. The amount of force exerted upon it is that exercised by the weaker layer of fibers in a state of conquered antagonism, and the rupture of the capsule is impossible.

If we take figure 4 as a correct representation of the fibroid tumor when situated in the central stratum of fibers, in which the antagonism is equal at all points, it will be evident that there is no tendency to rupture of the capsule, and much less crushing influence exerted upon it than if it were situated slightly nearer the mucous membrane.

This variety of the tumor, therefore, yields to the influence of ergot, only as it may be "starved out" by diminution of its blood supply, and as the effect of pressure, which we all know are the two conditions most favorable to absorption.

Now I think we have arrived at a point in this investigation where we can draw inferences as to the forms of tumors likely to be effected by ergot in different ways, as well as those that will not be effected by it.

We do not expect ergot to cause painful and efficient contractions in the healthy unimpregnated uterus; its fibers are not capable of such contraction, and it is not until the fibers have become greatly developed that they are susceptible to the impressions of ergot. In cases of early abortion, its action is very unreliable, but after the fourth month of pregnancy it acts quite efficiently.

In tumors of the uterus, the development of the fibrous structure is sometimes so slight that it is incapable of contraction ; there may be so many nuclei of degeneration that there are not enough sound fibers left for efficient contraction. Then, where there are many small tumors developed in the uterine walls, the circulation is cut off to such a degree that they degenerate into a cartilaginoid substance, and sometimes they are infiltrated with calcareous material. In none of these cases will ergot cause any appreciable results. When, however, there are but one, two or three nuclei of morbid growths, as they increase in size the fibers undergo the development necessary to enable them to contract with great efficiency, and render them susceptible to the influence of ergot.

Another condition which influences the hypertrophic growth of the fibers is the situation of the tumor.

Sub-peritoneal tumors do not cause as great growth in the fibers of their neighborhood as the intramural or submucous varieties. A single intramural tumor causes great development of the whole uterine tissues, but the development of the wall in which it is situated decidedly predominates. The submucous neoplasm so soon gains the uterine cavity, that the development is nearly the same in the whole organ.

When, therefore, we administer ergot for the cure of fibrous tumors of the uterus, the beneficial action of the drug will depend upon the degree of development of the fibers of the uterus, and the position of the tumor with reference to the serous or mucous surface. The nearer the mucous surface, the better the effects. If the tumor is very near the lining membrane, we may hope for its expulsion *en masse*, or by disintegration.

We can often select the cases in which good results may be expected. There are four conditions which are usually reliable for this purpose. They are, smoothness of contour, hæmorrhage, lengthened uterine cavity, and elasticity. A smooth, round tumor denotes, for the most part, uniform textural development ; hæmorrhage, a certain proximity to the mucous membrane ; a lengthened cavity, great increase in the length and strength of the fibers; and elasticity assures us of the fact that cartilaginoid or calcareous degeneration has not begun in the tumor.

An even nodulated tumor may be composed of many separate solid masses. These displace and prevent the growth of the fibers to such an extent as to render contractions inefficient. When hæmorrhage is not present the tumor is probably near the serous surface, and consequently not surrounded by fibers. A short cavity denotes short, undeveloped fibers; while hardness is indicative of unimpressable induration.

Although I have no experience in the use of ergot in such cases, I should expect large fibro-cystic tumors to resist the action of ergot.

From this view of the subject it will be seen that I freely admit that there is a large number of cases in which ergot cannot produce any good results, in consequence of the nature of the cases; but there is another reason of equal moment why ergot may fail to act upon such cases as would seem to be favorable, by the worthlessness of the drug and its preparations.

Dr. Squibb, of New York, a high authority, says in reference to this subject:

"The molecular constitution of the active portion of the drug seems, however, in its natural condition to be loose, and like a slow fermentation, to be undergoing slow molecular changes, so that by age its peculiar activity is slowly diminished until finally lost."

And again, "The ergot in the grain, however well kept, is known to become inactive without any known change in appearance, though the sensible properties, such as odor and taste, may and probably do not change. Ergot, in powder, is known to diminish in activity much more rapidly than when in grain, and probably soon becomes inert. The tincture and wine of ergot are believed to change, though more slowly than the ergot in substance. Whilst the extracts, and so-called ergotins, are all supposed to change more rapidly."

These facts, so explicitly stated by Dr. Squibb, are very suggestive as to the causes of the frequent failures of ergot, and need no comment.

When all these causes of failure are considered, the variety of experience met with in the reports upon its trial in the treatment of these tumors is not surprising. It should not, however, be discouraging; but should prompt us to more care in selecting the cases and securing reliable preparations of ergot. I have implicit faith in the action of ergot when all the conditions I have pointed out are present. I do not believe it to be uncertain in its action.

In addition to the above conditions, I believe perseverance an indispensable condition to success, as it often requires several months to get the best results.

The mode of administration should be governed by the objects to be attained. If we desire to cause the painless absorption of the tumor, the doses ought to be moderate in size, and not too frequently administered. Hildebrandt administered by hypodermic injection a preparation in quantities which represented from fifteen to twenty grains of the crude drug once daily, or once every other day; and it will often be sufficient — as proven by cases quoted in my address above quoted — once a week. If we desire to have the tumor expelled, we should administer full and increasing doses often repeated, and continued until the object is attained.

It will sometimes be necessary to vary the quantity and times of giving it to suit the susceptibility of the patient; less or more according to the amount of pain caused by it.

It is not essential to give it hypodermically, although when it does not produce much inconvenience this is a very efficacious method, it may be given by the mouth, in suppositories, per rectum, etc.

In concluding my paper, I desire to disclaim any expectation that ergot will supplant other modes of treatment. The expert surgeon will, as he always has, use his instruments to the neglect of remedies less summary in their effects, and in his hands the maximum of safety will obtain, but there are very few general practitioners, who ought or would be willing to undertake enucleation of fibroid tumors of the uterus. I do claim, however, that the judicious gynæcologist will lose fewer patients and make more cures by the consistent administration of this medicine, than can be looked for from surgery.

ARTICLE II.

A CONSPECTUS OF THREE DIFFERENT FORMS OF ACUTE INFLAMMATORY CARDIAC DISORDER.

By ROSWELL PARK, A.M., M.D., Assistant to Chair of Anatomy, Chicago Medical College; Surgeon to South Side Dispensary, etc.

An argument often urged against the advantage of fine discrimination in diagnosis, is that in the time and study spent over the signs and symptoms, the actual welfare of the patient may be overlooked. That this is now and then the case, or that we may occasionally meet a successful practitioner who is not an exact diagnostician, few will deny. Nevertheless who, among the cloth, can, now-a-days, afford to disregard anything that will assist towards the most perfect diagnosis possible? And who shall be so callow as to assert that an accurate comprehension of physical conditions is of trifling importance, so that one happens to hit upon the proper drug to exhibit.

The tabular form has always seemed to me the only one in which to set forth what the following conspectus aims to present, viz.: a view, limited but correct as far as it goes, of the diseases under consideration, contrasting each of their features with those of the diseases most resembling them. And if such a table embrace their pathology, their ætiology, etc., so much the more complete it is, and all the more entitled to the term conspectus.

Such the following aims to be. In table I, are presented the three forms of acute inflammatory cardiac disease, not depending on previous cardiac lesions for their causation. It is impossible to give a complete picture of each disease in the column allotted to it, but the effort has been made to so contrast their various features, that under no ordinary circumstances can they be confused.

In table II is presented a refinement of diagnosis made possible by the modern investigations, more especially of the German school of pathologists. Whatever may be said of the visionary character of their work in some directions, it will hardly require an extended experience to recognize the propriety of such a distinction.

It is hoped that the tables will be found complete enough without further explanation here. It only remains for me to mention the writings of Niemeyer, Bauer, Rosenstein and Schrœtter as those chiefly consulted in their compilation; while the various English authors have not been overlooked.

785 Wabash avenue.

TABLE I.

Endocarditis, Myocarditis and Pericarditis Contrasted.

ENDOCARDITIS.	MYOCARDITIS.	PERICARDITIS.
General considerations.	*General considerations.*	*General considerations.*
In general terms is a parenchymatous inflammation; *i. e.*, without exudation. It is seldom the result of direct irritation, but attacks for the most part those parts most exposed to strain and friction, *e. g.*, the valves.	Its history comprises inflammation, softening, disintegration and accompanying proliferation of the perimysium and consequent formation of cicatrices, or of abscesses, or chronic inflammations of the cardiac tissue.	Is an exudative inflammation, but because this exudate always contains fibrin (in variable quantity) it is not warrantable to attribute it to differences of crasis in the blood.
Usually accompanies acute articular rheumatism. Twenty per cent. of cases.	Its ætiology agrees very well with that of endocarditis. When it accompanies rheumatism it is usually an extension of an endo- or pericardial trouble.	Complicates about thirty per cent. of cases of acute articular rheumatism; those especially where several joints are successively attacked.
It often accompanies Bright's disease, also acute febrile maladies, puerperal fever, morbilli, etc., the blood of a fever patient acting as an irritant.	In certain cases it may be idiopathic—of independent origin — and have these other cardial inflammations consequent upon it.	It is rarely idiopathic; when it does so occur it is usually when other inflammatory complaints are epidemic, *e. g.*, pleuritis, pneumonia, etc. It may complicate Bright's disease, tuberculosis, chronic endocarditis, or aneurism of the aorta.
The existence of a diseased valve may be the cause of a chronic, or very slow, latent endocarditis.	It may be caused by chronic endocarditis, or by typhus, septicæmia, scarlatina, syphilis, etc.	May be the result of infection from septicæmia, puerperal fever, scarlatina maligna, small pox, etc, being a *consequence* and not a complication.

TABLE I.—(CONTINUED.)

Endocarditis, Myocarditis and Pericarditis Contrasted.

ENDOCARDITIS.	MYOCARDITIS.	PERICARDITIS.
General considerations.	*General considerations.*	*General considerations.*
It may happen as an extension of myocarditis or pericarditis, or, possibly, of pleuritis or pneumonia.	Thrombi caused by ulcerative or gangrenous disease of the lungs may be dislodged and carried into the coronary arteries, where they set up a circumscribed, purulent inflammation.	May be caused by an extension of myocarditis, endocarditis, pleuritis, pneumonia, etc.
	May be the result of a traumatism, though we should have to suppose some predisposition.	May happen as the result of some traumatism.
Favorite seat is usually the left side of the heart, except during fœtal life.	Its seat is usually the apex of the left ventricle, or the inter-ventricular septum.	The inflammatory action may be circumscribed or diffused.
Anatomical appearances.	*Anatomical appearances.*	*Anatomical appearances.*
Besides the usual changes in the endocardium, consisting of injection, puffiness, proliferation, fibrinous and chalky deposit, etc., there may be laceration of the endocardium producing aneurism of the heart or chordæ tendineæ, or valves,—adhesions of the same parts or ulcerations. The extension of endocardial inflammation to the inner layers of cardiac muscle, and conse-	Following quickly upon injection and discoloration comes softening with formation of granular detritus and fat globules, and proliferation, cicatrization, etc. If an abscess result there is no removal of products of disintegration nor incapsulation, but extension of the trouble and perforation, with pericarditis if it break externally, or with aneurism or septicæmia, metastasis	The morbid changes may present many modifications,—congestion, extravasation, serous infiltration, proliferation, adhesions, being the possible changes in the pericardium; while the effusion may be insignificant or immense, lightly or heavily loaded with fibrin, giving rise to trifling or serious precipitation upon the heart and pericardial walls; it may be clear or

quent loss of tone, may account for subsequent dilatation which so often takes place.	and death as a usual result if it perforate the endocardium. By making vertical sections the existence of foci may be proved, their favorite sites being the lower anterior or upper posterior surface of left ventricle and left papillary muscle of internal valve. This, of course, in less acute cases. Diminished functional activity may lead to formation of blood clots with subsequent thrombi and vegetations in the cavities of the heart	bloody, very flocculent or even purulent, and very rarely putrid or ichorous. The adventitious deposit may be invaded by tubercle; it may be ragged, as often happens when the result of extension of inflammation. It is only in cases of long standing that the substance of the heart suffers material alteration; this consists of serous infiltration and softening, with dilatation, or even with fatty degeneration.
Symptoms.	*Symptoms.*	*Symptoms.*
Supervening upon acute rheumatism it does not always declare itself at the same time with its cause; its appearance may be postponed for weeks.	A mild form seems usually to complicate both endo- and pericarditis. The greater the acceleration and smallness of the pulse, the more probable this view of the case.	Being rarely an independent malady its symptomatology is somewhat ill-defined.
In some instances there is pain over the præcordium, and a very frequent but soft, small pulse; these are by no means constant. Palpitation, from laborious and excessive action necessitated by serous infiltration, may be complained of.	When symptoms of cardiac disease appear, either in the course of a rheumatism or of other affections, and physical signs afford negative evidence of either endo- or pericarditis, the diagnosis is more probable.	Palpitation and pain over præcordium are the most usual signs; but excessive pain implies some implication of pleura or lung.
Fever may be idiopathic, of inflammatory origin, or it may be of a specific kind when Bright's disease, rheumatism, etc., are present.	Fever only moderate. Temperature but moderately increased; but if metastasis occur, the temperature is suddenly raised. Course rapid, three to eight days.	Fever not at all characteristic; but usually the more fibrinous the exudate, the higher the fever.

TABLE I.—(CONTINUED.)

Endocarditis, Myocardits and Pericarditis Contrasted.

ENDOCARDITIS.	MYOCARDITIS.	PERICARDITIS.
Symptoms.	*Symptoms.*	*Symptoms.*
Pulse may lose its frequency at the outset. If no obstruction to circulation exist, no special dyspnœa is complained of.	Pulse frequent, irregular, unequal.	Embarrassment of circulation and consequently the condition of the pulse, retarded or accelerated, will depend on the amount of effusion.
Restlessness, insomnia, delirium and coma, or like symptoms, depend largely on the ætiology. Vide Table II.	In children it may simulate brain disease, being sometimes accompanied by vertigo, heahache, syncope, lethargy or convulsions; these caused by interference with the regular blood supply to the brain.	If the pulse be frequent and small it may resemble some of the fevers of an asthenic type. There may be restlessness, insomnia, coma, etc. Delirium, if present, is of a peculiar type.
Dyspnœa and hyperæmia occur, caused also by serous infiltration.	More or less bronchitis, or even œdema of lungs and sanguino-purulent expectoration. Attacks of dyspnœa and præcordial distress may be very severe.	Dyspnœa almost always; especially when caused by compression of the lung, it may be very severe. As if to give most play to the least compressed lung the patient will sit upright or lie on the left side.
Rigors, acute swelling of the spleen or pain in its locality, vomiting, hæmaturia and albuminuria, hemiplegia or other signs of emboli or metastasis are of extremely bad import.	If, in addition to the above, signs of metastasis appear, the diagnosis is still more certain. Extreme cyanosis and dropsy, with dilatation, are most unfavorable. Equally so is it when the urine seems to be characteristic of Bright's disease.	It may terminate in chronic pericarditis with relapses, with small, irregular pulse, overloaded veins; or, in dropsy, cyanosis, dyspnœa, and even with possibly fatal œdema of lungs causing slow suffocation.

	In chronic cases there is increased venous pressure, with œdema, hyperæmia, hæmorrhages, dyspnœa, etc., on account of uncompensated valvular disease.	
The sequelæ, except when it terminates fatally, are always valvular lesions, and if there have been emboli, any of the numberless lesions that may result from their lodgment in the various organs of the body.	Among the sequelæ may be sudden development of valvular insufficiency, fibroid growths, cardiac aneurism, hypertrophy, dilatation, etc. Death may be caused by collapse, paralysis of the heart, rupture of the heart, œdema of lungs, embolism, etc.	The sequelæ of acute or chronic pericarditis may be: adhesions of heart and pericardium, dilatation, followed by hypertrophy or atrophy, and fatty degeneration from insufficient nutrition, caused by the pressure of the exudation.
Physical Signs.	*Physical Signs.*	*Pysical Signs.*
There is no bulging of the chest.	No bulging of chest.	There may be bulging of the thoracic walls, in young people especially.
If cardiac dullness at first be normal, after a few days there may be enough stasis of the pulmonary veins to cause accumulation in the cavities of the heart and some dilatation, with consequent extension of the area of dullness.	Apex beat scarcely perceptible and finally disappearing, pulse small, weak, irregular, feeble, and muffled sounds, constitute the usual physical signs.	The vigor of the heart-beat may be sometimes increased, or if the effusion be copious, it may become imperceptible; sometimes the upright position will make it perceptible.
Never any friction fremitus.	Never any fremitus.	Palpation sometimes gives a friction fremitus in the early stages.
Whatever changes there may be in the area of cardiac dullness, its limits are comparatively very slightly encroached upon.	The sounds may be clear, but the first indistinct and the second over the aorta very weak; or an unusually loud blowing murmur may be caused by a perforation of the ventricular septum.	Provided the lungs do not intervene there is early an unnatural dullness in front, with resonance behind, varying with the amount of the effusion, the heart seeking the deepest possible position when this

TABLE I.—(CONTINUED.)

Endocarditis, Myocarditis and Pericarditis Contrasted.

ENDOCARDITIS. *Physical Signs.*	MYOCARDITIS. *Physical Signs.*	PERICARDITIS. *Physical Signs.*
		is small; when it is large the area forms a triangle with the base downward. It may pass to beyond the left nipple and right border of the sternum. Extension, from day to day of cardiac dullness to the left of the nipple is a sure sign.
Substitution of abnormal murmurs at the apex for the systolic sounds, caused by inflammatory change in the parts which produce the normal sounds; according as there is a condition of insufficiency or obstruction, or both, these sounds will differ.	If clots and thrombi occupy any of the cavities, there may be a murmur from friction of the blood upon them. A systolic murmur is often heard at the apex of the heart, but its sounds are quite irregular in strength and succession.	The heart sounds are very feeble or inaudible. The disproportion between extensive dullness and feeble sounds is a diagnostic point. In addition there are usually adventitious friction sounds, which are of longer duration than the normal sounds. Compression may cause dullness of the lower lobe of the left lung, which must not be mistaken for the dullness of pleuritic trouble; pectoral fremitus upon palpation will ensure against this error.

Differential Diagnosis.	*Differential Diagnosis.*	*Differential Diagnosis.*
A few days after the onset the area of dullness may be widened, when dilatation of the right heart occurs early.	Must be made largely by a process of exclusion.	The area of dullness begins in the vicinity of the great vessels, and afterwards assumes the triangular form, with the base downward.
There will be exaggeration of the heart sounds with the above conditions rather than the reverse.	When, in pericarditis where the effusion is small, the heart's action, previously forcible, becomes weak, we may assume extension of the inflammation to the substance of the heart. When signs of insufficiency in the mitral or aortic valves, or in both, suddenly develop, it may be regarded as more or less characteristic. In this case the murmurs grow weaker and may be lost. Nevertheless, heart murmurs may, of course, disappear from other causes than this.	The apex beat, under the above conditions, becomes more and more imperceptible while the pulse still retains its volume.
Although the roughened endocardium is rubbed by the current of the blood, the friction sound is never as distinct.		The roughened walls give, if any, an almost unmistakably distinct friction sound and often a friction fremitus.
This friction sound is isochronic with the heart sounds and may supplant them.		This friction sound precedes and succeeds the heart sounds, but does not interfere with them.
Since the right ventricle lies nearest to and rubs against the thoracic walls, endocardial murmurs — which proceed usually from the left side — are very indistinct over the right side of the heart.		For the same reason pericardial friction sounds, when the inflammation is diffuse, are heard with equal advantage over either side of the heart.
These sounds are transmitted along the blood current, and are not influenced by change in patient's position.		Endocardial sounds are frequently confined to a small area and are not transmitted; they are liable to change with alteration in patient's position.

TABLE I.—(CONTINUED.)

Endocarditis, Myocarditis and Pericarditis Contrasted.

ENDOCARDITIS.	MYOCARDITIS.	PERICARDITIS.
Differential Diagnosis.	*Differential Diagnosis.*	*Differential Diagnosis.*
The endocardial friction sound can hardly be mistaken for any other.		The pericardial friction sound is to be distinguished from the pleuritic by its dependence upon or independence of the inspiratory movement.
In considering the above signs, the possibility of aneurism, dilatation or hypertrophy or both, old valvular lesions, etc., must be borne in mind.		In considering the above signs the possibility of aneurism, excessive dilatation of the right auricle, infiltration of the edges of the lung or retraction of its borders, etc., must be borne in mind.
Prognosis.	*Prognosis.*	*Prognosis.*
While life is seldom threatened and recovery usually follows, it is at the expense of some more or less permanent lesion of he circulatory apparatus. Vide Table II.	While there may be a relative cure, the heart remains in no condition to stand sudden or unusual demands. In general terms the prognosis is unfavorable.	The general tendency is usually to recovery in from one to six weeks, according to the severity of the case. In complicated cases the complication is usually of most importance, and the prognosis must be varied accordingly.

TABLE II.

Varieties of Endocarditis.

ULCERATIVE OR DIPHTHERITIC.	VERUCCOSE OR SUBACUTE.
Called diphtheritic because of the similarity of its processes with those of diphtheria; so acute and malignant is its nature.	Called "veruccose" because of the appearance of its lesions; termed subacute because it supplies the transition to the chronic, and has many points in common with it.
Pathology.	
The usual locality of the lesions is the left side of the heart; the valve flaps and appendicular and ventricular walls especially. Parenchymatous inflammatory changes and proliferation with subsequent softening, are very rapid, so that ulceration may take place before pus has time to form. Along with these changes are coarse, parenchymatous alterations in various abdominal glandular organs. The spleen is enlarged, even if it contain no emboli.	Usual site of the lesions is the left side of the heart (except when it occurs during fœtal life) and those surfaces of the valves most exposed to friction of the blood current. Inflammatory changes cause a veruccose, organized exudation, of more stable and enduring character. On this the constantly passing blood precipitates fibrin, often in polypoid tufts.
Micrococci form a prominent element in the *débris* of softened cardiac tissue.	Micrococci are never found; moreover there is no such *débris* in this form.
Embolic infarctions, with consequent abscesses, frequently result, the emboli acting as infective excitants of inflammation; multiple, capillary emboli being a characteristic.	The tufts or threads caused by fibrin deposited by the blood cause larger emboli when swept into the blood current. Their action is mechanical, and not infectious.
Complications with myocarditis or pericarditis are frequent; they are often caused by emboli of the coronary vessels.	These complications are frequent, but not from the same cause.
Extravasations into the brain meninges occur frequently.	These extravasations occur very rarely.
Embolic obstruction of larger vessels of the brain, and metastatic abscesses in the brain, are infrequent.	These lesions are more frequent, because the emboli are larger.
Valvular or cardiac aneurisms may be formed in spots weakened by softening and ulceration.	Are never formed.

TABLE II. — (CONTINUED.)

Varieties of Endocarditis.

<table>
<tr><th colspan="2">ULCERATIVE OR DIPHTHERITIC.</th><th>VERUCCOSE OR SUBACUTE.</th></tr>
<tr><td colspan="3">*Etiology.*</td></tr>
<tr><td colspan="2">Acute rheumatism, especially those cases unaffected by number of joints involved or degree of pain, is a prominent factor.</td><td>Acute rheumatism, without reference to its severity or number of joints attacked, is the most prominent factor.</td></tr>
<tr><td colspan="2">It occasionally occurs during puerperal fever, and is often accompanied by undoubted diphtheritic manifestations on the genitalia; *e. g.*, the endometrium.</td><td>A recurrent form is frequently developed during pregnancy and the puerperal state.</td></tr>
<tr><td colspan="2">Is an occasional result of pyæmic and septicæmic disease.</td><td>Is an occasional result of the acute exanthematous diseases of children.</td></tr>
<tr><td colspan="2">The existence of old endocardial changes, *e. g.*, thickened or retracted tissue, is often favorable ground for the development of ulcerous processes.</td><td>Old valvular disease is a frequent factor in the etiology.</td></tr>
<tr><td colspan="2">Age over forty seems comparatively exempt.</td><td>No age particularly exempt.</td></tr>
<tr><td colspan="3">*Symptoms.*</td></tr>
<tr><td>TYPHOID FORM.</td><td>PYÆMIC FORM.</td><td></td></tr>
<tr><td>*Marked by more general constitutional disturbance.*</td><td>*Character of fever and occurrence of metastases constitute the characteristics.*</td><td></td></tr>
<tr><td>If patient has had arthritic pain for some time, it suddenly gives way, while fever still remains high.</td><td>Begins with severe chill, with regular or irregular recurrence.</td><td>No prodromal symptoms. If it supervene on some other disease, neither the intensity nor type of fever are altered, unless this happen after convalescence has begun, when there may be renewed fever, and patient may complain of palpitation.</td></tr>
<tr><td>Or if fever has gone down, a chill comes on, followed by fever and sweating.</td><td>Roseolar, petechial or hæmorrhagic spots on skin, or even pustular eruptions attract attention.</td><td>Chill or shivering fits with perspiration only when embolism takes place.</td></tr>
</table>

TABLE II. — (CONTINUED.)

Varieties of Endocarditis.

ULCERATIVE OR DIPHTHERITIC.		VERUCCOSE OR SUBACUTE.
	Symptoms.	
TYPHOID FORM.	PYÆMIC FORM.	
Defined local complaint, except of palpitation, seldom made.	Same.	Palpitation and shortness of breath may be complained of.
Temperature high but variable. Pulse quick, soft, small. Tongue dry. Lips have a sooty coat.	Same group of features obtain.	Fever of intermittent type. Pulse quick but not hard. Tongue and lips present ordinary febrile appearances.
Vomiting not infrequent. Diarrhœa and constipation alternate.	Jaundice not infrequent. Diarrhœa with bloody stools.	Disturbances like these are rare.
More or less meteorism.	More or less meteorism.	No meteorism.
Spleen enlarged.	Spleen enlarged.	Spleen not enlarged, unless plugged by emboli.
Delirium and coma gradually supervene.	Same.	Delirium and coma rare, unless caused by emboli.
Urine and fæces passed involuntarily.	Dejections involuntarily passed.	Disease rarely reaches such an alarming stage.
Urine dark, containing albumen and sometimes blood.	Albuminuria a constant feature.	No albuminuria or hæmaturia, unless from emboli in kidneys.
A loud, systolic murmur is heard; occasionally also a diastolic murmur, best heard over the aortic ostium.	Same. If a diastolic murmur is heard, it is because the trouble is mostly confined to the aortic orifice.	A systolic murmur is heard, with maximum intensity, over apex and mitral valves, and with or without the first cardiac sound. Even if the aortic orifice is affected, the systolic murmur usually drowns the diastolic. This murmur is systolic or diastolic, according as insufficiency or stenosis predominate.

Table II. — (Continued.)

Varieties of Endocarditis.

Ulcerative or Diphtheritic.		Veruccose or Subacute.
Symptoms.		
TYPHOID FORM.	PYÆMIC FORM.	
Cardiac dullness depends on the situation and area of the lesion.	Same.	There is extended cardiac impulse, but no dullness, unless in the very late stages.
Symptoms common to both forms.		
Pericardial complications may cause considerable change in the above symptomatology.		Pericardial complications may more or less disguise the above features.
Respiratory disturbances are rendered remarkable by the discrepancy between the dyspnœa and the perceptible pulmonary lesions. They are usually caused by obstruction of the pulmonary vessels.		While respiratory disturbances are not as marked, usually, they have more or less of this same characteristic discrepancy.
The general constitutional disturbance, *e. g.*, *fever*, is far more constant than the cardiac symptoms.		General constitutional disturbance is never marked, so far as the effects of this form are concerned.
Temperature often falls, in a few days, below normal. Character of a remittent fever assumed, though chills may occur at any time.		Fever preserves more the intermittent type, and chills very seldom, if ever, occur.
Aside from disturbances of the sensorium, paralysis is often met with, and is the usual result of coarse lesions, *e. g.*, extravasations, etc.		Acute hemiplegia, with sudden loss of consciousness, can only occur as result of embolism.
Differential Diagnosis.		
Is made difficult by paucity of local symptoms.		The chief difficulty is in distinguishing accidental murmurs from those indicating actual acute disturbance.
Even a systolic murmur may be of accidental occurrence. A diastolic is of more importance; but to estimate it properly the possibility of chronic cardiac disease must be excluded. Even the presence of these auscultatory signs is not of so much		The presence of this form can only be positively diagnosed when the physical signs betray development of valvular disease — temporary or permanent. Having detected a murmur in, *e. g.*, rheumatic cases, it must be proved to be of acute origin.

TABLE II. — (CONTINUED.)

Varieties of Endocarditis.

ULCERATIVE OR DIPHTHERITIC.	VERUCCOSE OR SUBACUTE.
Differential Diagnosis.	
import as are changes in their characters.	
At first there is a systolic blowing sound confined to area of apex, which then grows weaker there and more audible at the base; later it is complicated with a diastolic blowing sound, and, finally, there is evidence of perfect insufficiency.	The intensification of the second sound in the pulmonary artery, the exact localization of the murmur, and the existence of transverse hypertrophy, even though slight, will all assist in this. Still it must be remembered that a passive dilatation may take place during almost any acute fever. While the sounds of the *right* side should be normal, there may be a sharp accentuation of the second sound of the pulmonary artery, caused by its distension and fullness.
Enlarged area of dullness along with the above — except it be owing to pericarditis — confirms the diagnosis, especially when taken with the other and general symptoms. It is distinguished from intermittent by its having no genuine apyretic intervals.	The absence of any hypertrophy or dilatation, or of any obstruction in peripheral arteries, like sclerosis of arterial coats, or of shrinkage of the kidneys, assist in the exclusion of former valvular trouble from consideration.
From typhoid, by disproportion in duration of symptoms, their severity, and absence of peculiar temperature curve and abnormal pulse rate.	From myocarditis and pericarditis it may be differentiated by aid of Table I.
Duration.	
When it follows acute rheumatic arthritis, it averages from two to four weeks; when it follows pyæmia or puerperal fever, from three to six days.	Relatively short, because it either leads to chronic valvular trouble, or else terminates fatally through complications with disease of cardiac substance or sac, pleuritis or pneumonia, or through embolism of vital organs.
Prognosis.	
While theoretically recovery is possible, practically no recovery has ever been recorded.	Life is seldom threatened, but absolute recovery is almost impossible.

ARTICLE III.

THE ETIOLOGY OF BOWEL AFFECTIONS IN YOUNG CHILDREN.

By N. S. DAVIS, M.D., of Chicago.

In the *Medical and Surgical Reporter* of Philadelphia, for August 2nd, and August 9th, is a very interesting and valuable article by Dr. T. S. Sozinsky of that city, on "the relations of age and the seasonal death rate." The writer makes a careful and reliable analysis of the mortality records of Philadelphia for three successive years including the year 1877; giving the mortality for each month and for each period of life, from birth to one hundred years and over. The tables give the average mortality of each month for the three years, and the same for each month of 1877 separately. The influence of season of the year in relation to age, is most strikingly manifested during the first year of life, but rapidly diminishes with each additional year until from ten to fifteen, the death rate remains the most uniform throughout all the months, but from fifteen onward the variations again increase until the period of old age. For instance, the lowest average mortality in Philadelphia for three years during the first year of life was 203.6 in November, and the highest 877.3 in July; from ten to fifteen the lowest average was 18.6 in October, and the highest, 30.6 in July. We thus see that the mortality during the first year of life is more than four times greater in July than in November, while from ten to fifteen years of age it is less than twice as great in July as in October. If instead of comparing particular months we take groups of months as they constitute spring, summer, autumn and winter, the result will be as follows, taking the average mortality for three years: The average per month for the spring months, March, April and May, under one year of age, is 295.2; for the summer months, June, July and August, 602.3; for the autumn months, September, October and November, 246.8; and for the winter months, December, January and February, 248.2. If we make the same comparison concerning the mortality between the ages of ten and fifteen it will stand as follows: Average for the three spring months, 24.8; for the three summer months, 26.2; for the three autumn months, 20.2; and for the three winter months, 23.1. The same comparison applied to what should be the most stable period of adult life from forty to fifty years of age, gives the following result: Average mortality for the three spring months, 127.4; for the three summer months, 107.9; for the three autumn months, 109.8; and for the three winter months, 111.4. Once more, if we extend the comparison to the period fairly representing old age, that is from seventy to eighty years, the result will be as follows: Average mortality for the spring months, 103.9; for the summer months, 82.1; for the autumn months, 77.6; and for the winter months, 95.8. It is thus seen that the influence of season of the year over the continuance of life is much more strikingly exhibited during infancy and early childhood, than during any part of adult life, or even old age. It is further seen that the mortality during the first period, begins to increase with the commencement of the warm season, reaches its maximum during the highest heat of summer, and recedes to its minimum at the beginning of the cold season, while during both adult life and old age, the mortality begins to increase with the ushering in of winter, reaches its maximum in the spring, and recedes to its minimum during the summer and autumn.

Dr. Edward Smith, in his work on Health and Disease, after a careful study of the vital statistics of England in comparison with meteorological conditons, arrives at the conclusion that the cause of seasonal variations in the prevalence of disease and death, "is the varying degree of vital action proceeding within the body at different seasons of the year." He claims that the maximum of vital activity is in the spring, its minimum in the summer, and its medium or most uniform period in the autumn and winter. While this view might be countenanced by the foregoing statistics in regard to the mortality of young children, the maximum of which corresponds with Dr. Smith's season of supposed minimum of vital activity, it would be directly contradicted by the statistics of mortality from the beginning of adult life to old age, during which, in this country, the statistics show the highest ratio of mortality in the spring. But while Dr. Edward Smith has claimed the spring as the season of greatest vital activity in the human system, Dr. S. Weir Mitchell claims that, in this country, the spring is "the season of greatest depression of health tone." I apprehend that all such general statements as those made by the two eminent investigators just named, are purely theoretical, and of no practical value; and that a more detailed study of the whole subject, more especially in relation to the nature of diseases causing death at different seasons of the year, would show that the variations of mortality in different seasons depended directly on the greater prevalence of diseases dangerous to life at one season than at another. And further, that the causes giving rise to such diseases are peculiar to the seasons, and not to any seasonal differences of internal vital activity or special health tone. Also that the differences in the seasonal mortality at different periods of life, is fully explained by the changes in the relative susceptibility of the several organs and tissues as we advance from infancy to old age. Thus, the fact is familiar to every intelligent reader, that the great increase of mortality which occurs during the two warmest months of every summer in infancy and early childhood, is caused entirely by diseases affecting the alimentary canal, more especially diarrhœa and cholera infantum; while throughout the whole of adult life, the maximum of mortality reached in the winter and spring, is caused almost as exclusively by diseases affecting the respiratory organs, such as pneumonia, pleurisy, bronchitis, laryngitis and phthisis pulmonalis.

Vital statistics and common observation alike show, that while in infancy and early childhood, the digestive organs and the cerebro-spinal nervous structures, are extremely susceptible to the influences of morbific causes, and constitute the seat of a large majority of the diseases fatal to life, such susceptibility rapidly diminishes with the advance in age, while relatively that of the respiratory, circulatory and excretory organs increases until during both adult life and old age, these latter become the seat of a large proportion of the diseases destructive to life. If we keep these changes in the relative susceptibilty of the various organs and structures at different periods of life in view, and the special meteorological characteristics of each season of the year, we shall have no difficulty in understanding the reasons for the seasonal variations in mortality, and the differences in such variations at different periods of life. But we shall never arrive at an exact knowledge of the relations between meteorological conditions and the prevalence of diseases, by a study of *mortality* records alone in comparison with coincident meteorological tables, simply because a large proportion of deaths occurs at periods more or less remote from the date of beginning of the disease causing the deaths. For example, many cases of infantile diarrhœa beginning under certain meteorological conditions early in July, do not terminate fatally until in the latter part of August or even in September, yet the meteorological conditions present and influencing the attack, have undergone many changes before the fatal result is reached.

So also, a pneumonia, pleurisy or bronchitis commencing under certain meteorological conditions in January, may not terminate fatally until in February or March, when the meteorological conditions are entirely different. It follows, therefore, that it is not the records or statistics of mortality, but carefully kept records of the *beginnings* of all acute diseases which are needed to compare with the meteorological records for the purpose of ascertaining how far any given meteorological conditions can be properly considered as efficient causes of disease. To show what has been done concerning this kind of records in relation to the bowel affections of children, I quote the following from a report made by me in the medical section of the American Medical Association at its last annual meeting.*

Referring to the group of diseases known as cholera morbus, cholera infantum, and serous diarrhœa, the report says:

" The general facts in relation to the prevalence and fatality of this group of diseases, are: First, that they are far more destructive to life in infancy than at any subsequent period of human life. Second, that they prevail almost exclusively during the warmest months of the year. Third, that they are far more prevalent over that geographical belt or climatic zone of the earth's surface characterized by a wide range between the extremes of cold in winter and of heat in summer. In our country, this includes all north of the north line of the Gulf States and east of the Rocky Mountains, and excludes the country bordering on the Pacific Ocean and the Gulf of Mexico. These general facts are proved by statistics of mortality familiar to all. For instance, in regard to the first, we find in the city of Chicago 743 deaths attributed to cholera morbus in 1876. of whom 722 were infants; in 1877, the number was 552, of whom 530 were infants; and the same ratio will be found in nearly all the cities and populous towns throughout the belt or climatic zone indicated.

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* See report on the Prevention of Bowel Affections, both in children and adults, as indicated by a comparison of clinical and meteorological facts relating to their etiology, in the transactions of the American Medical Association for 1879.

In reference to the second general fact stated, the same tables of mortality show that almost the entire number of deaths attributed to cholera morbus and cholera infantum took place in the months of July, August, and September. Thus in 1876, the total mortality of children under *two* years of age was in June, 238; July, 669; August, 679; September, 350; and October, 222: the entire excess of the mortality of the months of July, August and September over the months of June and October being from cholera morbus, cholera infantum, and diarrhœa. The same result is shown every year. Thus in 1877 the total mortality of *children* under *two* years of age, was, in June, 208; July, 700; August, 523; September, 309; and in October, 217.

The third general fact has not been so generally recognized. Yet, if we compare the infant mortality from bowel complaints in the cities bordering on the Gulf of Mexico and on the Pacific coast with those of the Middle and Northern parts of the United States east of the Rocky Mountains, the effect of extremes of the seasons will be very apparent. Thus, according to the statistics furnished by Dr. Henry Gibbons, Jr., Health Officer for San Francisco, in 1873, the ratio of deaths from cholera infantum in children under *two* years of age was in San Francisco only 5 in every 10,000 of the population, and in New Orleans 7; while in the same year it was 24 in Boston, 25 in Brooklyn, 34 in Chicago, and 21 in Omaha.

The foregoing general facts in relation to the mortality from choleraic and diarrhœal affections, are sufficient to show a close relationship between their prevalence and the heat of summer; and to render it probable that high temperature is, at least, a predisposing cause. But our clinical and meteorological records have developed two additional facts of great importance.

First, that the initial symptoms marking the commencement of each individual case of cholera morbus, cholera infantum, and serous diarrhœa, do not manifest themselves equally from day to day throughout the months of July and August, as the statistics of deaths would imply. On the contrary, the attacks occur in groups, the number of cases multiplying rapidly from three to six or seven days, and then leaving an interval of several days without the occurrence of a single new case. Thus of every hundred cases that occur between the last week in June, in the northern and eastern part of the United States, and the end of July, ninety will have had their initial beginning in groups embracing not more than one-third of the number of days in that month. And of those met with in August and September, more than three-fourths of the cases will have had their beginning during the same group of days in July. Second, a careful examination of the meteorological records kept by the Signal Service Bureau, at the several stations in the northern, middle and eastern parts of the United States shows that the high temperature of every summer manifests itself in waves lasting from three to twelve or fourteen days, but not often exceeding six or seven days consecutively, during which the temperature continues high both day and night. In the northern climatic belt of this country, the first of these waves of high temperature, continuing day and night for more than three days in succession, pretty uniformly manifests itself between the 20th of June and the 10th of July; and just as uniformly marks the *beginning* of the prevalence of choleraic and diarrhœal affections for that summer. These special waves of heat will generally be repeated twice during the month of July, and, with less intensity, once in August. But they vary much both in intensity and duration in different years. By comparing the clinical records furnished at Omaha, Davenport, Cairo, Chicago and Dunkirk, concerning the date of the initial symptoms of cases of the bowel affections under consideration, with the meteorological records, I have found the groups of days affording the principal number of attacks to be the same as those included in the special waves of high temperature; thus clearly demonstrating that *continuous high temperature* is, at least, one of the essential elements of *causation* in the production of this class of diseases. I say *continuous* high temperature, because a careful study of the facts shows that it is not simply an extreme heat of one day, or high heat of any number of days attended by cool nights, that determines the prevalence of these diseases; but continuous heat for several days and nights, during which the mercury rises above 30° C. during the day, and does not fall below 20° C. during the night.

Details illustrating these conclusions were given in the report to the section on Practical Medicine, etc., for 1877; which with the further details collected and carefully compared since, fully justify the statement that the chief *factor* in the causation of choleraic and diarrhœal affections, is, *continuous high temperature*, acting upon populations subject to a wide range between the extreme of cold in the winter, and that of heat in summer. And further, that the degree of prevalence and fatality of such diseases will be in direct ratio to the intensity and duration of the heat waves occurring between the middle of June and the middle of August."

The foregoing statements are strongly corroborated by the difference in the prevalence of the diseases under consideration in the same localities in different years. Thus in Chicago in 1876, the whole number of deaths attributed to these bowel affections, was 743; while in 1877 it was only 552. In comparing the meteorological conditions of the two years, it is found that the heat waves during the summer of 1877 were decidedly less intense and of less duration than in 1876. I see the same thing illustrated in London during the years 1878 and 1879. Thus, says Dr. L. P. Yandell, in a recent letter from London, published in the Louisville *Medical News* for September 13th, 1879: "Diarrhœa is the chief source of mortality in England, as it is in America, among young children. During July (1879) 230 fatal cases of infantile diarrhœa occurred; during the hot July of 1878 there were 1,976 innocents carried off by diarrhœa. Malaria is far the most abundant cause of bowel trouble, and quinine is the great remedy for these affections." In the same letter Dr. Yandell informs us that the whole summer of 1879 in London, was the coldest known since 1860, the mean temperature in July being only 58° F., while that of 1878 was above the average. The aggregate number of deaths of children under 5 years of age, was 2,628 more in the latter than in the former season. It will be seen by the foregoing considerations that we deem continuous high temperature, acting upon populations subject to wide contrasts between the temperature of winter and summer, as the efficient cause of the bowel affections, especially of young children.

It will be seen by the last part of the paragraph quoted from the letter of Dr. Yandell, that he regards *malaria* as the efficient cause. But if this were true these diseases should be as prevalent in New Orleans as in Chicago; in San Francisco as in Boston or New York; and their highest prevalence should be when the action of *malaria* is known to be most intense, namely, in August and September, instead of July. I close this article by quoting again from my report in the transactions of the American Medical Association, already alluded to.

"The coincident circumstances that give additional efficiency to the action of heat, are stillness or want of currents in the atmosphere and want of ventilation in dwellings; excess of moisture; and whatever impairs the general tone of the tissues or increases the sensitiveness of the mucous membrane of the alimentary canal. It is the co-existence of imperfect tissue developments, great susceptibility, and much confinement within the stagnant atmosphere of imperfectly ventilated dwellings, with the seasons of high temperature, that make the diseases under consideration so much more prevalent and fatal in infancy, than at any other period of life.

If these observations are correct they are of great practical value; first, in pointing definitely to the times when, and in what direction, sanitary measures should be adopted for restricting the number and severity of the attacks; and, second, the nature of the measures to be adopted, both for the prevention and cure of this class of human ills. It is plain, that so far as the time when preventive measures should be in readiness for practical use, the facts show that they should be in efficient operation coincident with the beginning of the first wave of continuous high temperature in each summer, and that they may be limited mostly to the period of such waves. If the children of the well-to-do are to be sent out of cities and populous towns to elevated, dry and healthy country districts — if those of the poor are to be provided for in parks and barracks in similar country locations as recently suggested by Dr. J. M. Toner and others — or put on board sanitary hospital ships to float in the cooler and purer air of large bodies of water, as practised to some extent in New York, Chicago, and perhaps other places; any and all these measures to act efficiently as preventives, must be in readiness and actually in active operation coincident with the first wave of persistent high temperature, and not, as is too often the case, delayed until the middle or latter part of July, when three-fourths of all who will be attacked during the season have already begun to suffer and many have died. So far as these measures can be made available at the right time they are efficient and valuable. But from the very nature of human society they can never be made to reach more than a moderate percentage of those who need them most. And as the great leading object is to lessen the effects of continuous heat upon the tissues of the body, a simple process that could be readily executed in every family, however poor, and yet prove of great efficiency, would be to introduce the custom of having all young children freely bathed every warm, oppressive summer evening, and during the special waves of hot weather, after the bath put to bed with a wet towel around the body to protract the cooling process. Such a custom, simple and inexpensive as it may appear, if generally adopted by the poor and rich alike, and especially if connected with increased attention to the capacity and ventilation of sleeping rooms, would every summer prevent a large proportion of the attacks that would otherwise occur; and would consequently greatly lessen the aggregate of infant mortality."

As already stated, the clinical records concerning the date of initial symptoms or beginning of attacks of the bowel affections, compared with the meteorological records in the same localities kept by the Signal Service Bureau, have demonstrated fully the constant coincidence between waves or periods of persistent high atmospheric temperature and the rapid devolopment of those affections. The only question that remains unsettled, is, whether the persistent high temperature, occurring in the regions already indicated, acts as a *direct exciting* cause of these affections, or *indirectly* by changing the electric and ozonic conditions of the atmosphere. As the records of the Signal Service Bureau do not include observations concerning the two last mentioned forces, there are not in existence the recorded facts necessary for determining the question.

In referring to the Annual Report of the Board of Health of Michigan for 1878, we find the results of observations concerning the ratio of ozone in the atmosphere, made in seven places in that State, indicated by tables and diagrams constructed by Dr. H. B. Baker; but as the daily record is not given, and the localities are not the same as those where our clinical records were kept, we cannot determine whether there is any fixed relation between the maximum of heat waves and the minimum of ozone. But in comparing Dr. Baker's diagrams representing respectively the range of temperature, atmospheric moisture, and ozone for the year 1877, based on the records of six or seven meteorological stations in the State of Michigan, the interesting fact is at once apparent, that the maximum of both temperature and moisture was reached on the 1st of July, and was maintained with but little diminution through that month and August, while exactly the reverse was the case in reference to ozone; the diagram indicating the minimum of the latter during the months of July and August.

Chicago, Sept. 22d, 1879.

Article IV.

The Mutual Autopsy Society of Paris. By Henry M. Lyman, M. D., of Chicago.

Considerable amusement was excited, a few years ago, by the announcement that a society for mutual autopsy had been formed among the savants of Paris, with a view to advancing knowledge of the structure and physiology of the brain by a correlation of intellectual characteristics with *post mortem* appearances. The whole thing was generally regarded as a scientific joke of more than ordinary magnitude. But the society appears to have been a genuine fact, and one of its members, M. Asseline, having recently deceased, his brain was carefully examined by his surviving associates, who made a full report of the result to the Anthropological Society of Paris. The following account of the matter is found in *Nature*, Aug. 14, 1879, p. 377 :

"M. Asseline died in 1878, at the age of 49. He was a republican and a materialist ; was possessed of enormous capacity for work, great faculty of mental assimilation, and an extraordinarily retentive memory ; and had a gentle, benevolent disposition, keen susceptibilities, refined taste and subtle wit. As a writer he had always displayed great learning, unusual force of style and elegance of diction, and in his intercourse with others he had been unassuming, sensitive and even timid. Yet the autopsy showed such coarseness and thickness of the convolutions that M. Broca pronounced them to be characteristic of an inferior brain. The fossa or depressions, regarded by Gratiolet as a simian character, and as a sign of cerebral inferiority, which are often found in women, and in some men of undoubted intellectual inferiority, were very much marked, especially on the left parieto-occipital. But the cranial bones were at some points so thin as to be translucent ; the cerebral depressions were deeply marked, the frontal suture was not wholly ossified, a decided degree of asymmetry was manifested in the greater prominence of the right frontal, while, moreover, the brain weighed 1,468 grams, *i.e.*, about 60 grains above the average given by M. Broca for M. Asseline's age. The apparent contradictions between the weight of the brain and the marked character of the parieto-occipital depressions, attracted much attention, and the members of the Société d'Anthropologie have been earnestly invited by M. Hovelacque, in furtherance of science, to join the Société d'Autopsie, to which anthropology is already indebted for many highly important observations. This society is forming a collection of photographs of its members, which are taken in accordance with certain fixed rules."

Clinical Reports.

ARTICLE VI.

NOTES FROM PRIVATE PRACTICE.

Was it Poisoning by Chloroform?

On Thursday evening, August 14, 1879, R. S., aged 27, single, spare habit, and healthy, purchased a fluid ounce of chloroform. For a few weeks previous he had been despondent, and drank rather freely of both alcohol and absinthe. In three letters, pronounced to be in his handwriting, to as many different persons, he expressed a determination to commit suicide. It is not known what use he made of the chloroform. He is supposed to have taken it internally.

Although seemingly well, he remained in bed on Saturday, August 16, and at noon took a cup of tea with a small piece of toast. About two hours afterward an empty ounce vial, labelled chloroform, was found on his bed. He was thought to be in a critical condition. The writer saw him at 3 p. m., but found him fully conscious, though pale, apparently weak and dull. There was no odor of chloroform from the breath. He was lying on the left side; eyes closed, pupils dilated, but readily responsive to light. Pulse 72, full and soft — normal probably — respirations full, deep and quiet; temperature normal; fingers and toes rather cold. He refused to talk either from real or feigned soreness of the throat. Indeed, a strong suspicion was entertained that the soreness of the throat was more pretence than reality in order to avoid being questioned. The few words he did speak were uttered in a very hoarse whisper. Nothing amiss could be seen in the mouth. He indicated with his finger that the soreness began just behind the larynx, and extended down to the epigastrium. Deglutition seemed both painful and difficult. There was a little tenderness at the epigastrium, but no sickness of stomach at any time. There was no danger then ; and none was apprehended.

He admitted, but subsequently denied, having swallowed two teaspoonfuls of the chloroform, at once, the previous night (Friday) at bedtime. In one of his letters, he told the party addressed to call, not later than 4 p. m. on Saturday, and see his corpse. If he took the chloroform at all, it is probable he did not do so until after eating the toast and tea at noon, when he had no difficulty in swallowing. Next day, Sunday, he was so well that medical attendance on him was discontinued. On Monday he sat up a while in his room.

During the night of August 18–19 he had diarrhœa, but the character of the stools is not known, as he was able to go to the water-closet. At 7 a. m. on August 19, he was found in his night dress, at the foot of the stairs, in a stupid, delirious condition, having slipped, probably, as he came out of the water-closet, which is at top of the stairs, and slid down to the bottom. He was taken back to bed. Then some blotches were noticed on the skin of his arms, but were attributed to injuries received in slipping down stairs. He continued delirious for a couple of hours.

At 11:30 a. m. I again saw him, and pronounced him dying. His appearance now was very remarkable. There was a well-marked icteroid hue of the skin of the face and neck. The jaundice was paler on the chest, and gradually faded away towards the extremities. Scattered all over the body, but more especially on the forearms and hands, were numerous purpuric spots varying in size from that of a large pin head up to one three inches long by two inches wide on the back of the right elbow joint. Neither the jaundice nor the blotches in the skin existed the previous day. Respiration was labored ; eyes closed ; conjunctivæ quite yellow ; pupils widely dilated ; no pulse at the wrists. Mouth partially open ; prolabia blue ; hands and feet cold. Temperature 36.70 in axilla. He was not entirely unconscious. He could and did swallow, and appeared to notice the pungency of brandy and ammonia. Once he moved his forearms inwards, and bent the fingers, claw-like, in a convulsive movement. This was the only convulsive action observed. The abdomen was flat. Pressure on the epigastrium and right hypochondrium caused him to moan aloud. Moving the body and lower extreminies also caused him to moan.

At 3 p. m. stertor, frequent turning of the head from side to side, and nystagmus set in. He died quietly, shortly after 4 p. m. During the two hours immediately before death, the icterus deepened.

As neither a chemical nor microscopical examination was made, I will not give any details of the autopsy, which did not throw any light on the cause of death. It is much to be regretted that the coroner did not order an analysis. Hæmorrhagic extravasations into the tissue of the heart, liver, stomach, etc., were observed.

I would beg to propound the following questions, and to solicit replies to them in this journal, particularly from those who devote special attention to chemistry and toxicology.

1. Would two teaspoonfuls, equal to at least three fluid drachms, of chloroform be likely to kill a healthy adult man, if taken at a dose, on an empty stomach?

2. Would a cup of tea and a small piece of toast eaten a little while before, prevent the fatal effect of a fluid ounce of chloroform swallowed soon after? Must not that quantity prove speedily fatal?

3. Even if the man did take, at a dose, three fluid drachms on Friday night, or a fluid ounce on Saturday afternoon, might the fatal effect be delayed until Tuesday forenoon, with entire absence of any evidence of chloroform in the system during Saturday, Sunday and Monday?

4. Can chloroform produce, in a man who had been drinking pretty freely of alcohol and absinthe for a couple of weeks before, icterus with hæmorrhage into the skin and internal organs?

I am aware that Dr. B. W. Richardson, of London, has seen "some of the characters of jaundice and some of the characters of scurvy" from the prolonged and frequent use of chloral in large doses, but he remarks: "The chloral, in undergoing decomposition within the body, divides into two products, the one chloroform, the other an alkaline formate, a soluble salt which makes the blood unduly fluid." Can chloroform alone do the same thing? Not that I am aware.

Phosphorus is the only agent known to me which can produce the appearances of the skin seen in this case shortly before death, unless chloroform can do so under the circumstances stated above. The writer is of opinion that phosphorus, in some form, was the cause of death. In the *British Medical Journal* for April 6, 1878, page 478, is given a case of phosphorus poisoning, in which jaundice was the only external evidence of the poison. On analysis, however, considerable phosphorus was found, in the form of phosphorous acid, which accounted for the absence of all luminosity. Under the microscope, characteristic appearances were found in the liver also. I believe if a chemical and microscopical examination were made in the present case, ample evidence of phosphorus must be found. There is a very close resemblance in the condition of the internal organs in the present case, with that seen in the case reported in the *British Medical Journal.*

The opinion of readers on this case would be very acceptable, I am sure, to Drs. M. O. Jones and N. Bridge, who had seen the case with me, as well as to Dr. D. R. Brower and to myself.

P. O'CONNELL, M.D.

CHICAGO, Sep. 4, 1879.

ARTICLE VII.

Chloral Hydrate Enemata Preparatory to Ovariotomy.

My opportunities having been large for the use of chloral, and having employed it for various purposes by enema, especially in delirium tremens and epilepsy (to assist the paroxysms of the latter), I offer the suggestion of chloral hydrate enemata as an immediate preliminary to the operation of ovariotomy.

Eighty grains dissolved in beef-tea, with a few drops of creosote added, may be safely and successfully used in epilepsia, puerperal eclampsia, and the persistent insomnia of obstinate delirium tremens, and I see no reason why, after the thorough clearing of the *primae viae* before proceeding to remove an ovarian tumor, it might not be the very best procedure to then administer a chloral enema, to put as effectual a quietus as possible on the bowels, and prevent the possibility of the annoying vomiting which so often follows the operation, and jeopardizes its success.

I think it quite possible for the operation to be safely begun on the patient while under the full influence of an eighty or hundred grain injection of chloral, and that the operation might proceed even to a completion of the operation in some instances, without having to resort largely to chloroform.

Vomiting during or immediately following ovariotomy, is a grave accident, and anything that promises to arrest it, ought to be tried, and in making trial of such remedies, if an agent be found that will put a quietus on puerperal and epileptic convulsions, and overcome the violent excitement and obstinate sleeplessness of acute insanity and *mania a potu*, such an agent should be tried. That remedy is hydrate of chloral.

In the use of chloral enemata, a single large dose should be given, and an interval of eight to twelve hours should be allowed to elapse before its repetition. This is the safe plan also when administering this valuable and potent agent *per orem.*

My experience embraces the administration of several hundred pounds of this drug in the last ten years without an accident traceable to its use. I have often given one drachm by the mouth, and not unfrequently one hundred grains *per rectum*, but have rarely ever repeated the former at less than eight hour intervals, or the latter at less than twelve.

C. H. HUGHES, M.D.

ST. LOUIS, SEPT. 2, 1879, 1313 CHOUTEAU AVE.

ARTICLE VIII.

A Singular Plug in the External Meatus.

On the 14th of August a gentleman connected with a pantomime troupe, consulted me in regard to an increasing deafness and tinnitus which he first noticed about six weeks previously. He always had good hearing; was never troubled by ear-ache, as far as he could remember. His rôle is that of the clown, who has to appear upon the stage all white from head to foot. Before each performance he had to paint his face with a whitening made of bismuth and pure lard, which, after the performance, was rubbed off again with lard. The auricles, of course, had to undergo the same process: and it seems that at every cleaning off of the auricle, a little of the bismuth and lard dropped into the external meatus, where, in the course of years, it accumulated to large deposits. For, upon examination, I found each meatus filled to the external orifice with a greyish-yellow substance, which, in consistence and cohesive power, resembled exactly half-dry putty. Injections of warm water made no marked impression on it until it had been treated with a solution of bicarbonate of soda. As far as the alkaline lotion, instilled repeatedly during the day, could penetrate within 24 hours, the plug was soft enough on the next day to be easily broken up and removed by injections. In three successive sittings both meatus were cleaned; the hearing was fully restored, and the tinnitus had disappeared. The removed mass was carefully collected in a glass; it was a mixture of cerumen, lard, fine hairs and a heavy, yellow-white powder, which, in water, sank to the bottom of the glass, and thus could be easily separated from the greasy matter. This powder, weight 1.65 grams, was recognized as oxychloride of bismuth by chemical tests.

F. C. Hotz, m.d.

181 Clark St.

O. C. Oliver, m.d., of Chicago, has been appointed Assistant Physician of the Elgin Hospital for Insane. A better selection could not have been made.

Prof. Chas. T. Parkes, m.d., who has been absent in Europe for five months, engaged in study, returned with Prof. Byford.

Two Legs.—According to the *Lyon Médical*, a *cause célébre* is on trial before the "Supreme Court of Colombia," [sic.] in the United States, where a man, who lost two legs in the late war, is suing to recover them from the general government.

Society Reports.

ARTICLE IX.

PROCEEDINGS OF THE AMERICAN DERMATOLOGICAL ASSOCIATION AT THE THIRD ANNUAL MEETING, HELD AT THE PARK AVENUE HOTEL, NEW YORK, AUGUST 26TH, 27TH, AND 28TH, 1879. (Reported by James Nevins Hyde.)

TUESDAY MORNING, AUG. 26TH. — At the conclusion of a business meeting, held with closed doors, the morning session was opened with the president, Dr. L. A. Duhring, of Philadelphia, in the chair. Present: Drs. J. C. White and E. Wigglesworth, of Boston; Drs. L. D. Bulkley, R. W. Taylor, H. G Piffard, C. Heitzmann, F. P. Foster, G. H. Fox and S. Sherwell, of New York; Drs. L. A. Duhring and A. Van Harlingen, of Philadelphia; Dr. I. E. Atkinson of Baltimore; Dr. W. A. Hardaway, of St. Louis; and Dr. J. N. Hyde, of Chicago.

THE PRESIDENT, Dr. Duhring, then read his address, entitled:

THE RISE OF AMERICAN DERMATOLOGY.

In tracing the history of the science, he gave an exhaustive résumé of all the earlier literature on the subject, and afterward a chronological account of the establishment of all chairs devoted to the subject in the principal colleges and special institutions for skin disease, as well as of the skin departments of the various large hospitals and dispensaries. Among the works referred to are the following: "A Brief Guide in the Small-pox and Measles," by Thomas Thatcher, which appeared in 1677, and is believed to have been the first medical book ever published in this country. The author of it was well known, not only as a learned physician, but also as a divine. A work on cancer by

Lieutenant-Governor Cadwalader Colden, a man of great learning and high attainments, and also author of a volume on the Climate of New York, which is better known than the other. "An Essay on the Causes of the Different Colors of People in Different Climates," is a long and elaborate treatise by John Mitchell, of Virginia, which is said to have been the first work ever published on that subject. Dr. Mitchell was also the author of a brochure on yellow fever as it prevailed in Virginia in 1741. "An Essay on the Causes of the Variety of Complexion and Figure in the Human Species," by Samuel Stanhope Smith, President of the College of New Jersey (1877). The book attracted a considerable amount of attention in Europe, and contained an account of the case of the negro, Henry Moss, of Maryland, who during a period of twenty years underwent a change of color from a deep black to a clear and healthy white. "An Experimental Dissertation on the Rhus Vernix, Rhus Radicens, and Rhus Glabrum," an able and exhaustive work by Thomas Hanfield. A "Dissertation on Perspiration," by James Agnew, of Princeton, New Jersey (Philadelphia, 1800), an essay of unusual excellence. "On the Warm Bath," by Dr. Lochette, of Virginia. "The Lues Veneria: the Modus Operandi of Mercury in curing Gonorrhœa," etc., by James Tongue, of Maryland, in which the author endeavored to prove that syphilis and gonorrhœa were two distinct forms of disease. "A Prospect of Exterminating the Small-pox," and a paper on the Cow-pox Virus, by Dr. Waterhouse, of Cambridge (1800). "The Jennerian Discovery," by C. R. Aiken. "The Structure of the Skin, with a View to the Diagnostics and Cure of Diseases usually denominated Cutaneous," a Boylston prize essay by George S. Shattuck, of Boston.

On the second of June, 1836, the "Broome Street Infirmary for Diseases of the Skin" was established in New York, with Drs. H. D. Bulkley and John Watson as physicians in charge. The following year a course of lectures on Dermatology was given at the Broome Street School of Medicine, by Dr. Bulkley, who had fitted himself for the work in Europe, and this was the first ever delivered in America on this subject. About the year 1830 the Medical Department of the University of Pennsylvania came into possession of a large and fine collection of models of skin disease, which had been purchased in Europe by Prof. George B. Wood, and this was the first treasure of the kind that was ever brought to this country. In 1861 Dr. J. C. White, the honored ex-president of the Association, gave the first course of lectures on Dermatology in Harvard University, and shortly after the close of the war chairs in this department were established in all the medical colleges of New York, Chicago, Philadelphia and other large cities. The New York Dermatological Society, an organization which has exerted so marked an influence on the study of skin disease, was founded in 1869, with Dr. H. D. Bulkley as its first president.

At the conclusion of the reading, a vote of thanks was unanimously adopted in view of the laborious research of the author and its valuable results.

DR. I. E. ATKINSON then read a paper entitled, A CASE OF INCOMPLETE VITILIGO. The reader, citing an earlier and similar case of semi-albinismus, reported by Beigel, proceeded to give the history of a mulatto woman, 25 years of age, a prostitute, measuring, in height, 171 centimeters; around the chest, 166 centimeters; about the umbilicus, 114 cm.; around the buttocks, 132 cm.; and around the thigh, 74 cm. At the age of 14, she had begun to menstruate, at 17 had ceased to be a virgin, had suffered from no other form of venereal disease than acute vaginitis, and was temperate in her habits. Five years previously, she began to exhibit the phenomena of the disorder on the back of the right hand, and subsequently was similarly affected upon the buttocks and the anterior surface of the trunk. Later, the surface of both hands and of the neck was irregularly involved.

The discoloration occurred in different shades, in discrete and confluent patches measuring one centimeter in diameter, each patch with a light center, enclosing irregular islets of integument. Usually the extensor surfaces were not involved. Over the breasts there were few patches, but occasional atrophic striæ. The surface of the abdomen and waist was exempt. There were atrophic striæ upon the anterior surfaces of the thighs, which posteriorly displayed multiple spots. About these there was a distinct increase in the pigment of the skin, but, as usual in these cases, it was difficult to note the difference. There was in no part desquamation, and sensibility was quite unimpaired. There were few hairs and these not altered in color. In December, it was clear that the patient was correct in stating that the patches appeared and disappeared. Then the hands were uniformly and symmetrically covered. There had been a restitution of normal coloring. The case was remarkable for: 1st. The complete absence of definite coloring matter in the affected patches. 2nd. For the complete recession of the disease. A similar case of reappearance of the normal tint had been reported by Dr. T. F. Wood, in 1877, in the case of a patient, nine years old, the folds of the skin being affected about the neck, though the disease commenced at the preputial fold.

DR. SHERWELL had seen somewhat similar appearances in a child of parents who were Carib Indians, the case being diagnosticated as one of macular leprosy. A photograph of the patient, taken by Dr. Fox, was exhibited.*

DR. WHITE referred to the fact that it was generally believed among the negroes that there was complete retrogression of the disease (vitiligo) and that this was remarkable in view of the absence hitherto of an exact record of such fact.

DR. TAYLOR stated that he had made such an observation in the person of a physician in Vermont, whose name he gave, who suffered from vitiligo of both hands only, during each summer, and who was quite free from the trouble in winter. Reference was made also to the series of cases collected by Dr. Yandell, of Louisville, all negroes, photographs of whom were in possession of several members.

DR. VAN HARLINGEN believed that in all these cases there was first an increase in the deposit of pigment. Hence the frequency with which the patches were noted among the races having dark skins.

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* This little patient was subsequently exhibited to a number of members of the Association, who had met by agreement in the amphitheatre of the New York hospital for the purpose of examining patients affected with certain rare forms of skin disease. It seemed to be the opinion of the greater number of those present, that the case was one of leprosy, though not macular leprosy. The surface of the skin was irregularly dyschromic, and the clearly defined dark patches were distinctly elevated above the general surface of the integument.

DR. TAYLOR observed that he had seen leucoderma in an Indian.

DR. FOX said that cases of the character under discussion, were explainable by a reference to the incompleteness of the pigmentary change. In these incomplete forms of leucoderma, there was appearance and disappearance of the pigment. He pointed to the well-known difficulty of declaring that any patch upon the skin was absolutely pigmentless. In this disorder there was a coincident melanoderma and leucoderma, the former always preceding. To this succeeded the leucodermatous patches. With reference to the case of Wood, cited, he remarked that in the negro the inner surface of the prepuce was pigmentless.

DR. WHITE suggested that it would be interesting to know whether there was any change in the color of the parts in the instance of the circumcised negro.

DR. J. N. HYDE, then read a paper entitled, A CONTRIBUTION TO THE STUDY OF THE BULLOUS ERUPTION INDUCED BY THE INGESTION OF THE IODIDE OF POTASSIUM. He reported the case of an eight-months old infant, affected with an ordinary eczema capitis, which disease had been followed by an abundant crop of furuncles. For these the drug had been administered in 0.33 gr. doses for one month, with the result of producing a bullous rash, chiefly disposed about the ankles and wrists. The lesions were pin-head to pigeon's egg in size, and were vesicular, pustular and bullous in character. They contained an inspissated serum, for the most part, which did not freely exude when the mature lesions were ruptured. The latter were of a dark purple shade and did not fail to disappear a few days after the suspension of the remedy, passing through the phases of crusting and healing beneath a scab. The reader had annexed a table of all the recorded cases of this eruption following the administration of the iodide of potassium, including the cases reported by Bumstead, R. W. Taylor, Duhring, Tilbury Fox, Cazenave, Otis, Hutchinson and the reader. In concluding, he set forth the several reasons for dissenting from the opinion given by Dr. Tilbury Fox, that the eruption was essentially a sebaceous gland disorder, among them the fact that the bullæ had been seen by both Dr. Duhring and himself upon the palms of the hands, where Biesiadecki and others have shown that there are no sebaceous glands; the occurrence of blood in the blebs as reported by authors also pointed to another seat of the lesion.

DR. WHITE enquired whether the reader intended to exclude also the sudoriparous glands as the site of the disease, and

DR. HYDE responded that he had no such intention, the clinical facts showing the improbability of a sebaceous origin having been suggested by the paper of the late lamented Dr. Fox, who had stated in so many words that the contents of the bullæ were altered sebaceous gland secretion.

DR. TAYLOR remarked that he had seen a patient affected with tinea versicolor, to whom the iodide of potassium had been administered and whose shirt had been stained blue in consequence.

DR. WIGGLESWORTH had seen a patient in whom a similar eruption had been induced by the ingestion of the potassium bromide, taken under the orders of Dr. Brown-Séquard. When examined, there were traces of a pre-existing eczema of the legs. But bullæ were also to be seen, acuminate, of the size of a pea to that of the third joint of the middle finger, fringed about the edge, with deeply ulcerated base, a few containing blood. After rupture, there was a dark crust, indicating the presence of blood. The lesions were not accompanied with much itching, and occurred upon the leg and thigh and the regions below the knee and the ankle, being in places confluent. In other places the tissues were denuded to the extent of several square inches. When the drug was discontinued, the eruption disappeared rapidly, and had never recurred. In all, the eruption had lasted some three or four months. In response to a question, the speaker stated that no arsenic had been employed to moderate the severity of the symptoms.

DR. WHITE stated that Dr. James Putnam, of Boston, had secured excellent results by administering arsenic for the bromide of potassium eruption, the rash rapidly disappearing after the patient was under the effect of the arsenical preparation.

DR. TAYLOR believed that arsenic controlled the rash produced by the iodide of potassium more readily than that induced by the bromide. In two cases treated by him where arsenic had been administered for relief of the bromide rash, it had seemed to have but little effect.

THE PRESIDENT stated that in his experience arsenic possessed very decidedly. a power of controlling the bromide rash. He recalled the case of a lady who came to him from Dr Seguin, of New York, with the eruption prominent over the face. She presented a note from Dr. S., in which it was stated that it was impossible for the time to discontinue the potassium bromide. Fowler's solution in doses of m.ij–iij., given with the bromide, procured almost immediate disappearance of the eruption. The improvement continued for two or three months, when the disorder recurred and was relieved a second time by the addition of the arsenical preparation. The treatment had been first suggested by Dr. Eccheverria of New York, some ten or fifteen years ago. Dr. Weir Mitchell of Philadelphia, had stated to the speaker that he had frequently employed arsenic for a similar purpose with the happiest effect.

Adjourned.

TUESDAY AFTERNOON SESSION.—DR. L. D. BULKLEY read a paper entitled, TWO CASES OF CHANCRE OF THE LIP. PROBABLY ACQUIRED THROUGH CIGARS. The reader began by referring to a history, given some years. ago of a young man communicating syphilis to a young woman who finished with her lips the end of the cigars which the former rolled together by the aid of his mouth. He was affected with buccal mucous patches. In both of the present cases the patients were physicians. The first, Dr. J., was thirty-three years old, married, the father of two children, and free from prior venereal accidents. Three weeks before the occurrence of any trouble, he had scratched his upper lip. When examined, he exhibited a clean-cut, indurated lesion at the site of the scratch, which had existed for six weeks. There were mucous patches in the vicinity, and a lesion upon the other side of the lip. A general macular syphilide followed, with rheumatoid pains. He had had no anti-syphilitic treatment. A diagnosis of chancre of the lip was made, and substantiated by Dr. F.

N. Otis, who saw the patient. He was a smoker of cigars and had never smoked a pipe.

The second case was that of Dr. F., who had suffered for from ten to fifteen years from a fissure of the lip. Six weeks before the consultation, the lesion gave origin to a serous discharge, and the glands of the submaxillary region became involved. The sore had been touched with a solution of chromic acid, 6.00 gr. to 30 gr., after this, nitric acid had been applied. In three weeks, the sore increased from the size of a finger-nail to that of a goose's egg, and an eruption ensued which first appeared over the forehead and which subsequently became general. When examined, the sore existed on the right of the median line and was 12 cm. in diameter. This patient was also a smoker of cigars; and remembered having, at about the time of the supposed infection, accepted and smoked a cigar, given him by a patient affected with syphilis of the mouth.

DR. HEITZMANN stated that this patient had consulted him also, and that at the time of his examination, he saw merely a swollen lip, covered with a dry crust. There was adenopathy of the right submaxillary region. He advised a poultice with the application of some cold cream to soften the part, and after the application, it was clear enough, the crust being removed, that there was a subjacent ulcer having all the appearance of a soft chancre. The patient had also a soft chancre upon the prepuce, which Dr. Bulkley had omitted to mention. Hence, the speaker had no thought of syphilis to follow, and had suggested that probably the submaxillary gland would suppurate. In fourteen days, the syphilitic eruption appeared. In view of all the facts, he thought that the doctrine of the so-called duality of the chancrous virus was no longer tenable. In one instance he had seen a penny-sized crateriform ulcer of the lip, which was supposed to have come from infection with a dentist's instrument.

DR. WHITE did not think that proof had been adduced sufficient to establish the fact of infection by the medium of cigars. Attention was then called to the fact that the reader had placed the word "probable" in the title of his paper.

DR. ATKINSON. briefly described some extra-genital chancres seen by him. In one case there was an abruptly elevated, red, glazed plateau of cartilaginous hardness on the right cheek. The hair there had fallen out, and the mouths of several follicles could be distingished as bloody points. There was co-existent submaxillary adenopathy and no history of venereal exposure. Secondary syphilis followed. In another case, a young man had a sore upon the finger as large as a ten-cent-piece, elevated, red, glazed, and of cartilaginous hardness, with epitrochlear adenopathy. A red streak was finally seen running up the arm, and a poultice applied. Quinine was administered internally. Phlegmonous erysipelas of the upper arm followed, and is now in process of healing. A sore of similar characteristics appeared on the dorsum of the thumb of an Irish woman, without destructive ulceration, red, glazed, and scantily discharging. No adenopathy.

DR. TAYLOR described two cases in which a cup and a towel had been the media of communicating syphilis. In the first case, a sailor, limited to the companionship of his vessel, had his lip split open with a pin and subsequently drank from the same cup with a mess-mate who had buccal mucous patches. The patient had been seen also by Dr. Otis. In the second case, a man had been confined to the same room with a syphilitic friend, and had used the same towels. In all cases of chancre of the lip, there was an ivory-like hardness of the pyramidal lesion, but he had observed the induration was much less marked in children, especially toward the vermilion border of the lip.

Responding to Dr. Heitzmann's remarks respecting the duality of the chancrous virus, he said that no one, today, attempted to diagnosticate a chancre by its external appearances alone, and that appearances were always fallacious. Soft chancres of the cephalic region had been observed by Morgan, Hutchinson, Bumstead, and others. In Jullien's new work, there was a table of the recorded cases.

DR. HYDE remarked that he had lately observed a series of cases of extra-genital sores of a syphilitic nature; one on the tongue of a railroad conductor, who smoked the pipe of his syphilitic brakeman; two, on the fingers of physicians, who had been probably inoculated through the medium of the contacts incidental to obstetric or gynecic manipulations; one, on the finger of a young woman who had cut her hand upon a piece of glass while attending an hereditarily syphilitic child. In all, there was marked induration, of the character described by the other speakers. But, with reference to the method by which these inoculations were effected, he had rarely found that the exact proof was at hand to establish the fact. In the vast majority of extra-genital chancres, it is simply impossible to secure proof as to the medium of infection. As to the existence of cephalic soft chancres, Dr. Taylor was probably aquainted with the interesting cases described some few years ago by Prof. Profeta, of Palermo, and published in the *Annales de Dermatologie et de Syphiligraphie*, the characteristics of the sores there described differing greatly from the appearances given by Dr. Heitzmann. In one instance, there had been a suppurating adenopathy of the submaxillary glands, the case of a butcher who had become infected in an attempt to minister to one of his customers similarly affected. The speaker did not think that Dr. Bulkley had established the fact of infection by cigars.

Dr. Van Harlingen described the case of a patient who had a sloughing ulcer follow excision of the tonsil, and subsequently developed papular syphilides which resembled flea-bites. Leeches had been applied to the throat, and the leech-bites took on the same appearance. Another instance occurred to him, where a physician had been infected in practicing insufflation of the lungs of a newly-born and asphyxiated infant. The child died in a few weeks; and it was found that its father and mother were syphilitic. Papular syphilides appeared upon the skin of the physician.

Dr. Fox exhibited some photographs of patients with skin diseases; one designated as macular leprosy, of which mention has been made, the other a case of leucoderma, in which the disease disappeared in the winter, the white spots remaining.

He continued by reading a paper, entitled THE TREATMENT OF ECZEMA AND ULCERS OF THE LEG BY AN ELASTIC TUBULAR BANDAGE.

The reader described the use made by him of a straight rubber tube, measured when lying flat, slipped over the limb so as to embrace it. It exerted pressure chiefly over the calf, but compressed also other parts, so that, for example, in eczema madidans and ichorosum, the serum was pressed from out the tissue. This serum macerated the parts, and, if the bandage was worn for too great a time, it removed the epidermis. The rubber naturally also afforded support to the limb. Being light, it possessed advantages over the other bandages in the market, and was also cheaper. The limb was first oiled, and the bandage then applied directly over the inflamed surface. In three days, ordinarily, an effect could be produced equal to that obtainable by other impermeable dressings in three weeks. Then should follow one of the usual topical medicaments, such as the ointment of the zinc oxide. The reader showed several bandages, of various thickness, one upon his own leg, which he had worn for a day, and that, during a walk four miles in length. When the bandage was removed, he showed a slight moistening of the underlying integument. He also exhibited photographs of patients affected with eczema of the legs, before and after the wearing of the tubular band. He believed that it would prove of value also, in the treatment of varicose veins of the lower extremities, acting upon the principle first suggested by Mr. Erichsen, a simulation of the action of the valves of the veins. In ulcers with callous edges, it would answer the indications for treatment in a remarkable manner. The advantages claimed were enumerated as follows: 1. Lightness, producing gentle pressure and a trifling degree of fluid transpiration. 2. Equability of pressure, as the tubular band fitted like an extra epidermis. 3. The saving of time and trouble in its application; it scarcely required removal until its effects were produced. 4. Cheapness.

DR. BULKLEY suggested that it might be applied also to the hand.

DR. SHERWELL suggested that it might also be manufactured with perforations, and a trap for the heel.

DR. FOX responded that he had tried several of these suggestions and had not found the results satisfactory. The use of the Martin bandage in eczema, required that it be applied above the knee, in order to effectually retain its position, while the tubular bandage suggested by him, could be made to cover any portion of the limb. It also produced much less artificial eruption. In cases, a starch powder was needful as a preliminary dressing. DR. HARDAWAY stated that he had seen the induced eczema, following the use of the Martin bandage, extend in a disagreeable manner.

DR. BULKLEY called attention to the fact that Dr. Martin employed a bandage of a particular manufacture, and not indiscriminately those made of rubber.

DR. C. HEITZMANN then read a paper entitled MICROSCOPICAL STUDIES ON INFLAMMATION OF THE SKIN, of which the following is a full abstract:

On looking over the history of the doctrine of inflammation in general, we are struck by the fact that since the date of the first use of the microscope, repeated revolutions have occurred. In the fifth decade of our century the so-called "humoral pathology" was the leading doctrine—its founder. the late C. Rokitansky, of Vienna, by whom the whole process of inflammation was thought to be caused by an anomalous mixture of the blood, and to run almost exclusively in the vascular system. Even the newly formed elements, the so-called "exudation and pus-cells" were considered as products of the fluid exudation, almost nothing being known about the changes in the inflamed tissues themselves. At that time the process of inflammation was demonstrated with the low powers of the microscope on the web-membrane of the frog. In the sixth decade the "cellular pathology" became the leading doctrine, and its chief representative, R. Virchow, of Berlin. This doctrine neglected the blood vessels, and their products, viz., exudation, to such an extent, that, based upon observations on cornea and cartilage, in which avascular tissues inflammation could be produced, the blood vessels were thought to be irrelevant factors of the process of inflammation. In the seventh decade, I. Cohnheim, of Leipzig, made the assertion, based upon observations upon the mesentery and the tongue of the frog, that in the course of inflammation the colorless blood-corpuscles almost exclusively participate, through emigration from the blood-vessels (capillaries and small veins), while the so-called cells of the tissues simply perish. In this view, all newly appearing elements, the inflammatory new formation and the pus-corpuscles, were emigrated blood-corpuscles.

Each of the leading doctrines had in its time a crowd of followers and believers. Rokitansky himself adopted in turn, in its main features, the cellular pathology, which holds good even in our day, for the majority of pathologists, so much so, that the emigration theory in its full perfection was taken up but by a few observers, some of whom, however, admit that, beside the colorless blood-corpuscules, the "cells" also of the tissues share in the inflammatory process.

Toward the end of the last and the beginning of the present decade of our century, S. Stricker, of Vienna, was the strongest opponent of the emigration theory, asserting that in each of the former doctrines there was a partial truth. Stricker studied inflammation mainly in the cornea, and the conclusions he reached were that blood-vessels and nerves are necessary participants in the inflammatory process, that the inflammatory new formation is almost completely a product of the "cells" of the tissues and their off-shoots, and that the emigration of the colorless blood-vessels is beyond the proof of our present methods of observation, so far as its participation in the inflammatory new-formation is concerned. Stricker was the first to prove the correctness of the hypothesis of John Hunter, that the essential changes in inflamed tissue consists in its reduction to a juvenile, embryonal condition.

Such was the standing of the doctrine of inflammation when I took up its study in 1872, in Vienna. I chose, first, cartilage, which is by no means an avascular tissue, as was thought in former times, but is provided with medullary spaces, which contain a complete vascular system, though in relatively great distances from each other, to such an extent that large territories of cartilaginous tissue are devoid of blood-vessels. Next I studied bone, which is far better fit for this purpose than any other tissue, and by degrees I extended my observations over pretty nearly all the tissues and organs of the animal body, including also the complicated organ termed skin. The results of these observations are laid down in a number of publications, both in German and English, partly from the pen of gentlemen of the medical profession, who have worked in my laboratory under my surveillance. I can fully corroborate the assertions of S. Stricker, above quoted. At the same time I take a step forward, and farther than any previous investigator; so much so that I venture to say, the inflammatory process is perfectly plain to-day in its minutest features, so far as our best modern microscopes allow of a definite conclusion. More than that, the present results of research are in full accordance with clinical observation; an accordance which was impossible when all former doctrines were accepted. My researches also explain the constitutional influence upon the inflammatory process in quite a satisfactory manner.

Let us briefly recapitulate the minute anatomy of the two main tissues, entering the structure of the skin, viz., epithelium and connective tissue. Each fact has been demonstrated for nearly five years to a large number of attendants in my laboratory, and proved by numerous observations on the tissues named, both in their normal and morbid conditions. The epithelium represents a continuous layer of living matter on the surface of the body, and on all cavities and elongations which are in direct or indirect communication with the outer surface. The elements of this layer are protoplasmic bodies, flattening each other, separated from each other by a cloak of horny cement-substance, and uninterruptedly united with each other by means of delicate spokes, the formerly so-called "thorns," traversing the cement-substance. The living matter, which produces a delicate reticulum in each protoplasmic body, its points of intersection being termed nucleoli, nuclei, and granules, traverses the cement-substance in the shape of "thorns," and thus produces continuity through all the living layers of the epithelial elements, as well as with the underlying layers of the connective tissue. Epithelium is devoid of blood and lymph vessels; but when living, is supplied with a large amount of nerves, which, in the shape of very minute, beaded fibers run through the cement-substance, and are here in direct connection with the fibrillæ of living matter, indirectly, therefore, with the reticulum of the living matter within the protoplasmic bodies themselves. Delicate excavations in the cement-substance, analogous to the well-known bile capillaries of the liver, and evidently destined to carry the nourishing material to the epithelia, have been recently discovered by Arnold of Heidelberg.

The connective tissue in that variety entering the structure of the derma, is built up by bundles of fibers, which, through manifold decussations produce a very dense feltwork, coarsest toward the subcutaneous fat tissue and finest in the outermost, so called, papillary layer of the derma. The main directions, in which the bundles of the fibrous connective tissue cross each other on different portions of the skin, have been accurately studied by C. Langer, of Vienna, and Tomsa, of Kiew. The bundles are bounded in many instances by a very dense basis substance, representing the elastic fibers, and separated from each other by narrow layers of a cement-substance (Tomsa), which in its chemical features is kindred to the glue-giving basis substance of the fibrous connective tissue in general. In this cement-substance there are imbedded delicate formations of protoplasm, greatly varying in amount in the derma of persons of different age. They represent formations analogous to nuclei, formerly so called "connective tissue cells," at present considered as compact masses of living matter, or delicate reticular layers of living matter, which with a power of 500 diameters of the microscope, look finely granular. The whole glue-giving basis substance of the bundles is traversed by a delicate reticulum of living matter, in direct union with all protoplasmic formations between the bundles, with all blood and lymph vessels, with all nerves, and with the columnar epithelia, nearest to the papillary layer. This reticulum of living matter, which I first discovered in 1873, is invisible in the fresh condition of the connective tissue, or in specimens obtained after hardening in alcohol or chromic acid solution, owing evidently to the refracting power of the basis substance; but can be brought distinctly to view through staining methods, such as nitrate of silver stain in a negative, and chloride of gold stain in a positive way, and through observation in all instances, when the refracting power of the basis substance is increased (deposition of lime salts) or decreased (liquefaction, dissolution) in different normal and morbid conditions of the connective tissue. Only the meshes of the network of the living matter contain the glue-giving basis substance, which, as the history of development of the connective tissue demonstrates, is produced by a chemical alteration of the lifeless protoplasmic fluid itself. The bundles of the connective tissue of the derma accompany all elongations of epithelial nature. The bundles produce the follicle around the root sheaths of the hair, the capsule around the sudoriparous glands, the accompanying layers around their ducts. The bundles of connective tissue are traversed in oblique direction by bundles of smooth muscle fibers, viz., the arrector pili, the numerous muscle bundles in the derma in and around the nipples, the scrotum and the labia majora. The connective tissue, furthermore, is traversed by relatively scanty blood vessels in the derma, by numerous capillaries in the papillary layer, and by lymph vessels, which produce a perfectly closed system, as demonstrated by Teischman, of Krakau, and Sappey, of Paris. Lastly, numerous nerves run through the connective tissue, both of the medullated and non-medullated variety. The former mainly produce the tactile corpuscles within the papillæ, the latter being partly sensitive, terminate in the epithelial layer ; partly motor, terminating in the bundles of smooth muscle fibers; partly vaso-motor, spun around the blood vessels (Tomsa); or secretory and trophic, supplying the sebaceous and sudoriparous glands, and all protoplasmic formations of the skin. About the termination of the latter varieties of the nerves, almost nothing is known.

The process of inflammation of the skin I have studied on specimens from a syphilitic papule; from small-pox; from an ulcerating sac of umbilical rupture in a cat; in its terminations on specimens of elephantiasis of the scrotum and the labia majora; as an accompanying process on the skin of the female breast in mastitis and cancer; on the skin covering different benign and malignant tumors, or directly engaged in the formation of such tumors; all types and varieties of which are represented in my collection. The results being almost identical in regard to the essential changes in the tissues of the skin, I can confine myself to the description of the inflammatory process in small-pox, of which I obtained six different specimens from the Blackwell's Island Hospital, amongst these, two of hæmorrhagic small-pox. In these specimens there are represented all stages of the disease in the most satisfactory manner.

The coarser microscopical relations in the formation of small-pox, have been accurately studied by Auspitz and Basch, of Vienna; the minute features, observable with high magnifying powers of the microscope—800-1200 diam.—only, and based upon the knowledge of the normal anatomy of the engaged tissues, are as follows:

First, the epithelial layer, termed rete mucosum, appears slightly thickened in circumscribed spots; the swelling is due to a coarse granulation of the epithelia themselves. The coarse granulation is produced by an increase of living matter within the protoplasmic bodies, evidently through an augmented afflux of nourishing material in the stage of hyperæmia. The points of intersection of the network of living matter, formerly so called granules, become enlarged, many of the nuclei shining and solid, and at the same time the threads traversing the cement substance, the formerly so-called "thorns," become thickened. The underlying papillæ are slightly enlarged in all diameters, partly owing to a dilatation and engorgement of their capillary blood vessels, partly through a peculiar change of the bundles of the connective tissue and the protoplasmic bodies between them. The latter look slightly enlarged, and in many instances coarsely granular, the former are partly transformed into protoplasm. In other words, where before there were present bundles built up by a glue-giving basis substance, at present the reticulum of the living matter, formerly hidden in the relatively solid basis substance, through a liquefaction or dissolution of this substance, became visible again. No other proof of the presence of an exudation in this stage is obtainable except the liquefaction of the gluey basis substance. This stage of inflammation is termed "papular." Next, in the midst of the papule, on one or on several spots, the exudation makes its appearance—the outer or epidermal layer at no time participates in the morbid process. In some epithelia we notice an enlargement of the meshes of the living reticulum, the latter is first stretched, afterward torn apart, the granules being now suspended in the liquid exudation. Where there were present epithelia before, a small, irregular cavity is visible. If several such cavities had formed in a papule through a continuously increased accumulation of the exudation and destruction of the epithelia, the separating layers of the epithelia become compressed and produce septa, traversing the cavities. Such septa greatly vary in number and width. The neighboring epithelia look very coarsely granular. Many of them have lost the inclosing cement substance, and are thus transformed into protoplasmic clusters, in which, through a considerable increase of the living matter, new shining lumps of different size have appeared still in continuity with the neighboring reticulum by means of delicate threads, the so called endogenous formation of new elements. The result of this process is the formation of an irregular cavity in the midst of the greatly widened rete mucosum, traversed by septa of compressed epithelia; filled with an exudation in which there are suspended numerous delicate granules, generally termed coagulated albumen, and a varying amount of irregular threads in the shape of a felt-work, the coagulated fibrin. Scanty protoplasmic bodies are suspended in the exudation also, perhaps remnants of the destroyed epithelia, perhaps immigrated inflammatory or colorless blood corpuscles.

In this condition of the rete mucosum also, the underlying connective tissue exhibits considerable changes. The papillæ have disappeared, evidently through the pressure from above. The transformation of the connective tissue into protoplasm has advanced, in some instances to such a degree, that the uppermost layers of the derma are replaced by numerous indifferent, or medullary or inflammatory elements, as a rule, clustered together. All these elements, however, are in interrupted connection with each other through delicate threads of living matter, fully analogous to those of the epithelia, and thus the inflamed tissue, though reduced into its medullary condition, still represents a tissue. The stage of the disease in which the changes just described have taken place, is known as the vesicular stage of small-pox.

Lastly, pus corpuscles appear in the cavity within the rete mucosum; they doubtless arise in their main mass from the epithelia, traversing and bounding the cavity. Through the increase of living matter in a large number of epithelia, shining lumps appear, first homogeneous looking, afterward through the intermediate stage of vacuolation transformed into nucleated protoplasmic bodies, with a fully developed reticulum of living matter—the pus corpuscles. The main source of pus corpuscles, therefore, are the epithelia themselves, the endogenous formation. How many of the pus corpuscles have appeared through an immigration from below, from the inflamed connective tissue or from the blood vessels, nobody can tell. The immigration is a sensible hypothesis, only, without direct proof or foundation, while the endogenous formation can be directly traced in all its stages. The pus corpuscles look coarsely granular, viz., are supplied with a large amount of living matter on the points of intersection of the living reticulum in persons of a good strong constitution ; on the contrary, they are finely granular, that is, scantily provided with living matter in persons of a weak, so-called scrofulous or tuberculous constitution, or in persons debilitated by different acute or chronic diseases. In the former instance the pus is thick and yellow, in the latter instance watery, serous and pale. The subjacent connective tissue in many instances does not advance beyond its reduction into a medullary tissue. In some cases, however, the newly appeared and newly formed medullary elements, which produce the infiltration of the derma in a varying depth, are also torn asunder, and thus represent pus corpuscles, which commingle with the pus sprung from the epithelia, and share in the formation of the abscess.

This stage of inflammation is known by the term pustular stage of small-pox, and represents the typical termination of the whole process. The pustule either bursts or its contents dry and produce the crust. So long as the inflamed derma remains in the condition of medullary tissue, so long, therefore, as the medullary or inflammatory elements remain connected with each other, the reformation of a glue-giving basis substance in the shape of bundles of fibrous connective tissue will be accomplished, without the formation of a scar. If, on the contrary, a part of the connective tissue has been transformed into pus, and thus completely destroyed, the result will be a cicatrix. Mere epithelial suppuration heals without, suppuration of the connective tissue always with the formation of a scar. The pigmentation of the skin, so common after small-pox, is due to the imbibition by the reticulum of living matter of the epithelia, of the coloring matter of the red blood-corpuscles ; or by changes of directly extravasated red blood-corpuscles. both in the rete mucosum and the derma. Such extravasations occur in all severe cases of small-pox, in the highest degree, of course, in hæmorrhagic small-pox.

My observations on inflamed portions of skin have led me to the following conclusions:

1. In epithelium, the first step of the inflammatory process consists in an increase of the living matter, both in the protoplasmic bodies and between them; the former produces the coarse granulation of the epithelia, the latter the thickening of the so-called "thorns" in the cement-substance. Any particle of living matter, both in the epithelia and between them, through continuous growth, may lead to a new formation of the epithelial elements, with termination in hyperplasia of epithelium (psoriasis, squamous eczema, horny formations, etc.).

2. In connective tissue, the first manifestation of the inflammatory process is the dissolution of the basis-substance and reappearance of the protoplasmic condition; by this process and the new formation of medullary elements, which may start from any particle of living matter, the inflammatory infiltration is established. The sum total of the inflammatory elements, which remain united with each other by means of delicate off-shoots, represents an embryonal or medullary tissue. If the new formation of medullary elements be scanty, resolution is accomplished by reformation of the basis-substance (erythema, erysipelas, etc.). If, on the contrary, the new-formation of medullary elements be profuse, a new-formation of connective tissue will result (hyperplasia, scleroderma, elephantiasis, etc.).

3. Plastic (formative) inflammation may be accompanied by the accumulation of a larger amount of a serous or albuminous exudation in the epithelial layer (miliara, sudamina, herpes), or in the connective tissue of the derma (urticaria). In both instances complete resolution will ensue.

4. Suppuration in the epithelial layer of the rete mucosum is produced by an accumulation of an albuminous or fibrinous exudation, by which a number of epithelia are destroyed, and by new-formation of pus-corpuscles from the living matter of the epithelial elements themselves. Epithelial suppuration heals

without the formation of a cicatrix (eczema madidans et putulosum, impetigo, pemphigus, variola).

5. Suppuration in the connective tissue of the derma results from the breaking apart of the newly formed medullary elements, which being suspended in an albuminous or fibrinous exudation, now represent pus-corpuscles. Pus is a product of the inflamed connective tissue itself, and always a result of destruction of this tissue. Suppuration of the derma invariably heals through cicatrization (abcess, furuncle, acne, ecthyma, variola).

The reader illustrated his paper by extempore sketches upon cards, which were handed to members of the Association, during the reading, representing the normal anatomy of the skin and each stage of the process described.

In response to questions by Drs. ATKINSON and SHERWELL, he stated his belief that the ultimate changes in the variolous pustule were the result of fatty degeneration of pus cells, resulting in a cheesy product. The cells, after absorption of serum, shrivelled from lack of nourishment. When hæmorrhage occurred, crystals of hæmatoidine were visible.

DR. HYDE inquired whether the reader accepted the usual explanation of the phenomenon of umbilication viz.: the tying down of the roof-wall by stretched rete bodies, and was answered in the affirmative.

Adjourned.

WEDNESDAY MORNING SESSION. — The following officers were elected for the ensuing year: President, Dr. L. A. Duhring; Vice-Presidents, Drs. E. Wigglesworth and W. A. Hardaway; Secretary, Dr. A. Van Harlingen; Treasurer, Dr. I. E. Atkinson. The time and place of the next meeting were decided to be the last Tuesday, Wednesday and Thursday of August, 1880, at Newport, R. I.

The first paper of the morning was read by DR. H. G. PIFFARD, and entitled VIOLA TRICOLOR. The reader cited several writers of the years 1772, 1779, 1785 and 1843, who described the wild pansy (*viola tricolor, pensée sauvage*), as incisive, vulnerary, valuable in certain diseases of the skin, and especially in in *crusta lactea*. He had employed specimens of the plant imported by himself, and exhibited these, together with several other specimens obtained at various drug establishments in the United States, the latter differing greatly in external characteristics, both from the imported specimens and from each other. The reader explained his use of the wild pansy, both in a fluid extract, prepared from his imported specimens, in infusion, and in combination with purgative doses of senna. His experience with it, led him to believe that it was chiefly valuable in eczematous disorders of the upper part of the body, and that it decidedly aggravated those occurring in the lower portions. For a time, even in cases of eczema capitis, there was an aggravation of symptoms under its use. When administered, the urine of the patient had the odor of the urine of the cat.

DR. WHITE inquired whether the article had been administered to individuals in perfect health, and whether the effects of the senna, administered in combination with it, had been duly separated.

DR. HEITZMANN proceeded to refer to the well known experiments of Hebra in testing the value of internal medication in skin diseases, by the administration of an infusion of hay, internally, which, in combination with local treatment, produced such wonderful effects as to give rise to the couplet:

"O! Gramen, Gramen!
What a powerful medicamen!" [Laughter.]

DR. FOX expressed his belief in the value of both internal and external medication in skin diseases, and thought that he had obtained results by that method, which could not have been otherwise produced. Purgation was certainly of value in diseases of the head. Hebra had, it was true, employed the viola tricolor as a placebo, but he himself had employed it with good results. As to the value of catharsis, he referred to a case of erythematous eczema of the face, where he had employed a lotion of carbolic acid to relieve the itching, which could not be made to improve until he had administered a mixture of sulphur and senna, when improvement rapidly followed. Hebra was certainly in error in condemning purgation.

DR. WIGGLESWORTH responded that Hebra recognized the value of purgation in diseases which were slowly progressing, but had laid stress upon the merely temporary value of such procedures. He cautioned against reliance upon internal treatment of the character proposed.

DR. HARDAWAY stated that he had been disappointed in departing from treatment which was not strictly local, but in certain cases of eczema had obtained benefit from the internal administration of ergot.

DR. SHERWELL thought a mild mercurial, in such cases, often proved of the greatest value.

DR. PIFFARD concluded the discussion by referring to the views of the French school; the eminent Professors Hardy, Bazin, Guibout, Devergie, and others, all employing and laying great stress upon internal medication. The best results were unquestionably obtained by a mixed treatment.

DR. VAN HARLINGEN then read a paper entitled, A CASE OF HITHERTO UNDESCRIBED TUBERCULO-PUSTULAR DISEASE OF THE SKIN. The patient, aged 39, had spinal curvature, but the general health was fair. There was no specific family history. The present disease was supposed to have appeared early in life, since which time there had been no relief. It was worse in winter, and had been at times accompanied by adenopathy, chills and diarrhœa. When examined, two skin disorders were recognized. 1st. A papular eczema of violaceous tint, affecting the arms, forearms, neck, cheeks, nose, brow and back, the scalp being free. It was a smooth eruption, in no places scaly. 2nd. Over the lower third of the thighs, the legs and the ankles, were solitary, large, finger-nail sized, roundish, firm, nodules or tubercules. They were semi-solid. firm, hard, elevated to the extent of 2 to 3 mm. and not acuminate. They were seated on a harsh, dry, and slightly infiltrated integument. Fifty were counted upon the left leg; 30 upon the right; 8-10 over the thighs. Their course was; First, itching, with an elevation resembling urticaria. In 12 hours, there was a fully-developed firm nodule, flattened like a mint-drop, of a dusky pink color. In one to two days, there was central exudation, with production of sero-pus, which finally became completely purulent. Absorption occurred last. If emptied, the evolution was more rapid. Then they assumed an ash color, and the lesions were smaller. Before complete disappearance occurred, weeks and even months elapsed. No cicatrix was left. Then a curious fact became apparent; in precisely the same localities, the same phenomena recurred, and in similar stages. There were no subjective sensations. Under the influence of the potassium iodide, a papulo-pustular eruption had at one time developed, for which the liq. picis alkalin. had been employed. Once, a small, tender, sausage-shaped tumor appeared on the inner face of the thigh, which was thought to be a scrofulous lymphatic development.

Microscopical examination of a section of a urticarial tumor, 24 hours old, showed the disease to be purely inflammatory. Under a low power, the stratum corneum was seen to be raised as in vesiculation, the epidermis being split, the cells of this layer not staining. Below, there was a normal rete with exudation granules, considerable pigmentation, and no small celled infiltration.

DR. HEITZMANN, to whom the sections had been submitted, remarked that the second specimen exhibited the ordinary signs of inflammatory infiltration in flat vesicles. The third specimen was especially excellent and interesting, exhibiting the large papillæ crowded with inflammatory corpuscles, the main changes occurring in the capillaries of the papillary layer. A number of these capillaries were transformed into solid strings, with a still-to-be-recognized endothelial wall. Pigment granules were abundant, as is often the case in organic disease. Atrophy had resulted from the pressure of the newly-formed connective tissue, so that the capillaries were changed into mere bundles of connective tissue. The pigmentation in these cases resulted from the narrowing of the vessels, the imprisonment of the blood corpuscles, and the subsequent changes by which the latter became broken up, the pigment coloring staining all the neighboring tissue. The case did not seem to him to have been an especial one. It was an eczema of long continuance, probably aggravated by scratching.

DR. VAN HARLINGEN called the attention of the last speaker to the rapid changes occurring in the part.

DR. DUHRING, who had seen the patient, did not think that the case was an eczema, and did not agree with the author of the paper in diagnosticating the eruption over the upper portion of the body as a papular eczema. The ring of pigment was distinct and peculiarly characteristic in all the lesions, and the recurrence of the papules in the exact site of their predecessors was a striking feature. He believed the disease to be one *sui generis*.

DR. ATKINSON believed that he had seen cases which presented features intermediate between eczema and those observed by the reader. They were of the character of erythema nodosum.

THE CHAIR (Dr. Hyde) inquired whether in those cases there had been recurrence at the exact site of former lesion, as in Dr. Van Harlingen's case.

DR. ATKINSON responded that he had not observed such recurrence.

DR. S. SHERWELL then read a paper entitled, TATTOOING OF NÆVI. In it he described the results of his method, as previously published, in the case of a lady who had a port-wine stain of the face, involving the vermilion border of the lower lip, extending to the facial artery, with ill-defined peninsular-like prolongations at several points. During a period of 18 months, he had twice tattooed over the whole with a mixed solution of chromic and carbolic acids, diluted; there had been a slightly flattened scar as the result. Seven months had elapsed since the last operation. He had been unsuccessful with the method of Balmanno Squire, of London. The instrument employed by him was shown, and he stated that he laid great stress upon the after treatment of the cases by the employment of pressure with a coat of collodion. As there was a great difference between the sensitiveness of different patients, he usually first performed a tentative operation. Dr. Sherwell then exhibited his patient to the Association.

DR. HEITZMANN remarked that the title of the paper contained a misnomer. "Tattooing" was the introduction of pigments beneath the skin, such as India ink, as used by oculists in the cornea, or cinnabar, to produce the vermilion border of the lip in cheilo-plastic surgery, the introduction of indigo, etc. The pricking or puncturing operation, proposed by the reader, had long been known. The end to be attained was simply the excitement of sufficient artificial inflammation to occlude the vessels. Pricking with the introduction of a foreign substance, electro-puncture, etc., had all been used. But the introduction of pins alone was sufficient to produce the result.

Dr. Sherwell responded that his claim was not as to the originality of the operation, but to the introduction of a foreign substance and to the subsequent collodion compression.

Dr. Hardaway said that he had employed electrolysis in such cases with better results than by any other method. The destruction was immediate, the hæmorrhage nil, the scar slight. He employed a bundle of No. 13 cambric needles in a holder.

Dr. Fox had employed electrolysis in one case with fair results. He was of the opinion that multiple punctures were better. He considered the results obtained by Dr. Sherwell remarkably good. The needles employed by himself were closely set and in a leaden handle, for convenience of use. In 1874, he had recommended a smaller instrument. The results obtained by him, after the method of Squire, had not been satisfactory. The production of complete freezing was very difficult, yet he had taken great pains in the three cases where he had tried it, and in all been disappointed.

Dr. Sherwell responded to a question, that he expected to complete the cure of his case after one further operation. He preferred few needles, as the area of impact was thus more evenly attacked.

Dr. White said that much was to be learned in the treatment of these deformities. He had tried Squire's method on two occasions and, failing completely, would never try it again. As to repeated acupuncture, he had never obtained the results of Dr. Sherwell, even in the superficial varieties known as "spider-cancer." We cannot obliterate all the telangiectasic spots. In none of the deeper-seated forms, would he expect to accomplish success. He had employed electrolysis upon one occasion with a single needle.

Dr. Hyde had employed electrolysis with a single irido-platinum needle upon two occasions, and the results had been quite satisfactory, although in one case the nævus was small. As to recurrence, there had been a small pin-point sized vascular spot return in the centre of the seat of one operation, which he had watched for six months, and which in that time had not increased in size.

DR. WHITE then presented the ANNUAL REPORT OF THE COMMITTEE ON STATISTICS OF SKIN DISEASES IN THE UNITED STATES. From the seven districts assigned to members, five reports had been made, these including nearly 6,000 cases of skin disease, occurring in both dispensary, hospital and private practice. The Boston, New York, Philadelphia, St. Louis and Chicago districts were included in the report. Tables were presented in which the number of cases of each disease was set opposite the name of each, in the order of the classification adopted by the Association. A special report on the subject of leprosy was also made, in which were included the cases gathered by Dr. Saloman, of New Orleans, 14 in all; five cases reported by Dr. Hyde, one made the subject of a clinical lecture and observed by himself, four occurring in his district in the States of Wisconsin and Minnesota. Notes of these cases were appended. Also one under the care of the Chairman of the Committee, Dr. White, in Boston, the patient being a native of Louisiana.

DR. HEITZMANN, referring to the difficulty of diagnosticating leprosy, remarked that he had been summoned, with a physician, to see a case of "leprosy," which proved to be melanotic sarcoma.

DR. HYDE responded that the diagnosis in the Minnesota and Wisconsin cases had been made by Scandinavian physicians, in every case; one of them for years the pupil and hospital assistant of the late Professor Boeck, of Christiana, and all of them familiar with the disease as it occurs in their native land.

DR. DUHRING remarked that he had lately seen a well-marked case of the disease in a native of Cuba.

THE COMMITTEE ON NOMENCLATURE reported merely in favor of correcting a typographical error which appeared in the first copy of the classified list of diseases; and also in favor of changing the relative positions of carcinoma and sarcoma in class 6, sec. 3, leaving thus the word sarcoma in that class, and making a new sub-section, 4, in which the word carcinoma should appear. The changes were agreed to. On motion of

DR. HYDE, it was agreed to defer consideration of further changes in the classification and nomenclature until the next meeting, members to propose changes in writing to the committee before the date of the meeting; and the committee to be required to present such proposed changes to the association.

Adjourned.

WEDNESDAY AFTERNOON SESSION.—DR. HARDAWAY read a paper entitled A CASE OF MULTIPLE TUMORS OF THE SKIN ACCOMPANIED BY INTENSE PRURITUS. An unmarried woman, 51 years of age, complained that, 20 years ago, she first suffered from "blisters" upon the hands, which were accompanied by itching. The bullæ at first contained fluid, afterward, in the seat of each, a tumor appeared, which has since persisted. There was no cachexia, and her physical appearance was fair. The parts invaded were, the hands, arms, shoulders, feet and legs as far as the knees. The rest of the body was not implicated. The lesions were darkly pigmented, and varied in size from that of a large pea to a hickory nut; the largest, elevated five and more millimetres. The epidermis was thickened and roughened. Among the tumors were nodulated patches or plates, as large as a silver dollar, some of them long and narrow. The tumors preponderated upon the outer aspect of the arms and legs, the palms and soles not being spared. In parts, the eruption was quite painful, in consequence of the cracking of the integument. The pruritus was excessive, both in the tumors and plates, which moreover presented a symmetrical development. The healthy skin was not pruritic. In all, some 60 lesions were counted. The site of greatest aggregation was the hands and feet. In a few places could be seen cicatricial points. The question arose, were these lesions sequelæ of the conditions described as blisters? The patient stated positively that the original tumors had never disappeared. Even the ulcerated and cauterized patches would return. During 16 months of observation, there had been no new developments. One large, hickory-nut sized tumor, which had been removed, recurred in the original spot. The cicatrices were few and pea-sized, disproportionate to the existing lesions. The tumors were not painful, though the pruritus continued. The patient has taken mercury, arsenic and the iodide of potassium without affecting the lesions after 16 months.

Sections of the tumors had been examined by Dr. Heitzmann. There was found a hyperplasia of the epithelium and layers of the connective tissue. The rete was increased and the papillæ were enlarged and branching with narrowed capillaries. In the derma, were nests of visibly enlarged inflammatory elements in all stages of transition. The deeper layers of the derma were built up of very close bundles of connective tissue. The inflammatory process had chiefly affected the upper layers of the derma. The reader showed some micro-photographs of the sections made.

DR. HEITZMANN remarked that the upper layers exhibited the sole evidences of the process, the lower being unchanged. The disease was inflammatory, and not a new growth, one, however, with which he was not acquainted. The disease was certainly unique. The sections had been well made, Schultz's "thorns" showing very clearly. It was a scar-like disease of the thin and branching papillæ.

DR. L. A. DUHRING then read a paper entitled, SUPPLEMENT TO A CASE OF INFLAMMATORY FUNGOID NEOPLASM. The reader proceeded to give the full subsequent history of the patient presented by him before the Association at its last meeting, an account up to that date having been then read and subsequently published in the *Archives of Dermatology*, January, 1879. There had been a fatal termination, and the history of the entire symptoms during the last illness was graphically detailed with a full account of the post mortem section, and of the microscopical examination of several of the cutaneous tumors, as well as of several portions of the viscera and of a somewhat singular growth found in the bladder. The paper was illustrated by a new lithograph of the face of the patient, taken while she was living, and, when compared with that previously exhibited by the author, it furnished an exact picture of the changes effected by the malady since the last report. The sections subsequently made were also exhibited, and a portrait of the similar case described by Geber, was shown in colors.

In the interesting discussion which ensued, DR. HEITZMANN was strongly of the opinion, formerly expressed by him regarding this case, that the growth was a sarcoma, and he pointed to the fatal result which he had predicted from the microscopical appearances alone, as confirming this view. He praised the author for the exceedingly careful and accurate description given by him of the clinical and other features of the case.

On the other hand, a number of members pointed to the fact that the author had chosen a title for his two reports which was purely descriptive and not necessarily exclusive of sarcoma. Again, even on the hypothesis that the disease was really a sarcoma, it was claimed by several that the disease described by Dr. Duhring, was so different in its singular clinical history and microscopical features that it was certainly right and necessary to characterize and set these by themselves. As to the prediction made by Dr. Heitzmann, it was stated that an examination of the lady, without the aid of the microscope would have readily led, and in fact did lead, to the same conclusion.

DR. J. N. HYDE then read a second paper entitled, ON A VARIETY OF MOLLUSCUM VERRUCOSUM PRESENTING CERTAIN UNUSUAL FEATURES. The author described a case of molluscum observed by himself presenting certain rare peculiarities; notably, a tendency to recurrence of the lesions which were numerous; their bleeding when wounded; the absence of a central punctum and of sebaceous, milky, curdy or lobulated contents; the occurrence of pigmentary staining in the site of the lesions after disappearance; the absence of subjective sensation; and the vesicular aspect of the bodies. Opinions were read from Prof. Kaposi, of Vienna, to whom a photograph and minute description of the features of the case had been sent, and also from Dr. S. C. Busey, of Washington, who had been interested in the question of the telangiectasic or lymphangiomatous origin of the disease. The reader exhibited an oil painting of the patient, which represented the molluscous bodies at their full development, together with photographs of the case, and drawings of the appearances presented on microscopical examination of sections of the tumors. The conclusions of the paper were as follows:

"1. The case described is one exhibiting certain rare and peculiar features, and cannot, therefore, be made to serve as a basis for generalization. It is merely a contribution to the literature of the subject.

"2. Considering it, nevertheless, in connection with certain other cases, especially those described by Mr. Hutchinson, of London, it would seem to be reasonable to admit, that there is a variety of molluscum whose characteristics differ in a marked degree from those first observed by Bateman and since studied by later investigators. These characteristics are, briefly, an extraordinary multiplicity of small, pointed, white-capped, more or less solid lesions, resembling vesicles in their external appearance, generally destitute of milky or fluid contents, often without a central depressed orifice, and, at times, intermingled with other lesions, whose characteristics point unmistakably to the sebaceous origin of the disease.

"3. To the objection possibly brought against the conclusion last stated, that the lesions in question are merely incomplete and undeveloped forms of molluscous bodies, it may be responded that in the case here described, there were several recurrences of the disease, none influenced by either external or internal treatment, each accompanied by an abundant and copious development of the eruption, under circumstances particularly favorable to the growth of typical mollusca.

"4. The term molluscum verrucosum, proposed by Kaposi, properly designates the clinical features of the lesions to which the name has been limited in this sketch; and, in any view, is useful in distinguishing all the wart-like varieties of molluscum sebaceum, from those typical lesions to which the title of contagiosum was formerly applied.

"5. As between those authors who hold that even the atypical or wart-like forms of molluscum, originate in disorders of the sebaceous glands, and the authors who oppose this view, the case here described would point to an origin from protoplasmic bodies in the rete by proliferation, rather than to a disorder originating primarily in the sebaceous glands.

DR. ATKINSON remarked that he had observed a case of probably similar character, in the person of a young mulatto woman. Unfortunately the patient had soon after escaped from observation.

Adjourned at a late hour.

THURSDAY MORNING SESSION.—DR. J. C. WHITE read a paper entitled, ETIOLOGY. Referring to the views of different authors respecting the etiology of cutaneous disorders, the reader showed that, as a result of superstition or ignorance, the skin had been held guiltless of its own disorders, and had been made the battle-ground upon which were displayed the effects of disorders of all other parts of the body. Popular names of diseases of the skin embodied this belief, and "peccant humors," "efflorescences," "breaking out," etc., lay at the root of the danger supposed to arise from interference with skin disease, resulting in their "striking in," being "driven in," etc. But: 1. The skin enjoyed an inherent independence of other organs. 2. Its pathological processes were identical with those taking place elsewhere. 3. The same methods of observation and reasoning were applicable to it, as to other parts. Upon the first point, the reader stated that those who denied the autonomy of the skin, chiefly the French school, presented arguments in favor of their doctrines which were founded purely on theory, and in favor of which no positive fact was presented. The efforts to combat the so-called "dartrous diathesis" were suggestive of the attempt to exorcise spirits. In England, gout was of frequent occurrence, and the doctrine of a gouty diathesis was there held to account for the existence of skin diseases; but in this country, where gout was rarely encountered, the same skin diseases existed, and with nearly the same frequency. In malarial districts, malaria was esteemed to be the cause of skin troubles, which yet did not fail to manifest themselves in non-malarial districts. It was charged that the blood was disordered in many cases, but where was the satisfactory evidence that actual morphological changes had there taken place? Where, the proof that these changes, if established, had a direct and etiological connection with the skin disorder? Where, the great mass of collected facts necessary to place the proposition on the basis of clinical demonstration? The same charge had been brought against the urine, but in disorders of the skin, the changes in that fluid were trivial, and those which were undeniably to be found in the course of other disorders. He did not esteem lightly the evidence afforded by chemistry, nor did he fail to recognize the relation between the kidneys and the general conditions of the body; but with respect to the precise conditions which it was sought to establish, he thought applicable here the aphorism of Huxley, that there was "no approximation to a demonstration."

Upon the third point, the reader continued by briefly referring to the several viscera, which were esteemed to be efficacious in the production of skin diseases. Of the brain and nervous system, it was said that it had become fashionable of late to refer to them as the sources of all diseases. He admitted that delicate nerve fibres had been recently traced as far as the rete, and that it was well known that certain efflorescences were the result of what was called reflex action and nervous irritation. But what did the terms, "faulty innervation," "neurosis," etc., mean, beyond the mere fact that the blood vessels were under the control of the nerve fibres in the skin, as in other parts of the body. Nervous pathology lent but little support to dermatology. Did we look for a great development of skin diseases in insane asylums? [Laughter.] As for the lungs, consumptives were not known to suffer from disorders of the skin to a greater extent than other patients. The doctrine that parasites especially flourished upon such skins, was probably the result of the fact that persons with diseases of the chest exposed its surface to the examination of physicians more frequently than others. In 40 children affected with tinea in school, he had found as great exuberance of the vegetation upon the robust as upon the weak. So, too, respecting the stomach. While it was true that urticaria resulted from certain articles of diet, there was no basis for the general opinion that acne and eczema depended upon gastric disorder. Acne and dyspepsia were two common affections, and must often necessarily co-exist. For two years he had carefully examined every patient affected with acne as to the existence of dyspepsia, and had found but a small percentage of them suffering from any gastric disorder. In similar terms the reader discussed the agency of the heart, the liver, the kidneys and the reproductive organs, denying to each any special agency in the causation of cutaneous maladies, fully recognizing, however, the intimate relations between the genital organs and the skin, as evinced by study of comparative anatomy, in the pigment and tissue changes connected with the season of rut, etc.

DR. HEITZMANN followed with a high encomium of the paper which had been read. He fully endorsed the views of its author, and expressed his pleasure that they had been presented to the Association by its first president, the oldest of American dermatologists.

DR. FOX dissented from some of the opinions expressed, declaring that after his experiences in Vienna, where he had been taught the doctrines of the German school, and his studies in London and Paris, his views had undergone a change. He believed in the sympathy of all the organs of the body, and thought that even in functional disorders of the internal organs, there were skin changes.

DR. SHERWELL enquired whether the reader would not employ internal treatment in urticaria, and was answered that the treatment of skin diseases was not under discussion, but only the question of etiology.

DR. BULKLEY remarked that he would be willing to rest the argument upon the admissions which had been made by Dr. White in the paper read. Enough had been said to establish the fact that internal causes did operate to produce diseases of the skin. The reader had, however, ignored the exanthemata, syphilis and the influence of diet and hygiene in the production of effects.

DR. TAYLOR expressed his belief in the value of internal treatment of many cutaneous disorders.

DR. FOX recurred to the subject of acne in connection with gastric disorders. Being asked by DR. HYDE, whether he had not treated patients with acne who had never suffered from dyspepsia, etc. He admitted that he had.

DR. WIGGLESWORTH believed that there was some misconception of terms as employed. The treatment of the disease and the treatment of the patient were two very different things. In point of fact, the skin was either an external or an internal organ of the body, according to its temporary situation, and internal treatment was actually local treatment. All treatment is, to a certain extent, local. Take the case of a military garrison.

They succumb to the enemy only when sufficiently reduced in their defensive power to be unable to resist attack. A laundress when her health is good, does not suffer in her hands from the external irritation to which they are exposed at the tub. But once let there be a condition of unstable equilibrium, and the processes of waste and repair are disturbed, her epithelium, removed by friction, etc., is imperfectly restored. She becomes the victim of the " washerwoman's itch."

DR. R. W. TAYLOR then read a paper entitled, ON THE NATURE OF SYPHILIS. He discussed the various theories which have been put forward in connection with this subject, dissenting from the view of Hutchinson that syphilis ends with its secondary period, from the view of Després that syphilis is a purulent diathesis, there being no pus in the secretion of the initial sore, and from the views of Otis, expressed in 1871, as to the lymphatic origin of the disease.

" Syphilis is a disease of the connective tissue, and not primarily of the lymphatics or of the blood-vessels, although the blood may be temporarily modified and may be the vehicle of contagion. The secretions of syphilitic lesions are found to consist of a serous fluid containing numerous shining granules or molecules, which are masses of protoplasm or germinal matter, holding the contagious properties of syphilis. These microscopic bodies are probably taken into the circulation by the lymphatics, and conveyed over the body. The fact that serum alone does not convey the syphilitic poison goes to prove that the corpuscles hold the contagious material.

" In the secondary period of syphilis these cells are very numerous, and the body may be covered with papules and tubercles composed of them. As the disease wanes, these lesions become more localized and fewer in number, and the blood is less contagious. Finally, these cells may be limited to a few gummous tumors; the blood no longer carries the molecules, and it loses its contagious properties. The cells no longer have a tendency to reproduction, which characterizes them in the early stages, but rather degenerate. Hence we consider the blood and the secretions in tertiary syphilis innocuous. . . . . The periods of latency observed in the course of syphilis are of interest, and may perhaps be explained in the following way: Each outburst is attended by the development and multiplication of the peculiar cells, which run their course and are fully absorbed. Some remain, and after a time are excited by unknown causes to activity. Thus repeated exacerbations may occur, each one depending upon the multiplication of cells remaining from a previous outburst. But each relapse is less active and less prolonged than its predecessor, until perhaps only one nodule, and that composed of effete cells, may remain. The disease is thus cured."

DR. ATKINSON declared that he could not imagine cells which were too old to reproduce themselves! Did age depress the vitality of the cellular elements of the body to that extent? We have, furthermore, proof that all parts of the body are not infected with syphilis when the disease exists in an individual.

DR. HEITZMANN inquired whether the reader had intended to convey the idea that the carriers of contagion in syphilis, were granules.

DR. TAYLOR said that, in the unirritated lesion, there was no pus, but that shining molecules of protoplasm could be there detected which differed from the appearances presented by the chancroid ulcer.

DR. HEITZMANN:—"Molecules of protoplasm" is an unheard of term. Do these "molecules of protoplasm" carry the disease?

DR. TAYLOR:—They deposit and carry the disease.

DR. HEITZMANN:—What proof have you that the fluid part does not carry the disease?

DR. TAYLOR:—That is assumed since it can be demonstrated that the serum of the initial lesion is not inoculable. The albumen is coagulated.

DR. HEITZMANN:—"Assumed" is the word. All this is cheap theorizing! Who has heard of protoplasmic cells and molecules? Give us a demonstration of facts. Thus Lostorfer described his "corpuscular elements." What we need is fact and observation. The whole thing is at present a puzzle, except that we know mercury is good, and the best smearer of it, is the best man to treat the disease.

DR. TAYLOR responded that his opinions were not wild theories. That they were virtually the views of Cornil, Wegner, Wagner, Lancereaux and other eminent syphilographers, who had for many years studied the evidences of syphilis with the microscope and with as much care as any of those present.

The last paper read was a short communication by DR. W. A. HARDAWAY, entitled A SIMPLE METHOD OF OBLITERATING VARICOSE VESSELS IN ROSACEA. He employed a No. 13 cambric needle, attached to the negative pole of a galvanic battery, the patient holding the sponge electrode in the palm of the hand. Six to eight feebly-charged cells were required. Few vessels bled during the operation; indeed the column of blood could be seen to run up the lateral channels, probably in consequence of the evolution of gas during the process. Sometimes the vessel itself was punctured, but it was not necessary to hit this in every case. The operation was followed by no unpleasant results. It was not nearly so difficult a task as the obliteration of the hair papilla. The needle was inserted to the depth of from one and one-half to two millimetres, and kept in contact for a few seconds. In some cases, he had failed on the first attempt, and had succeeded in the second.

DR. WHITE stated that, in all the cutting and gashing operations practiced by him for the relief of these cases, he had been greatly disappointed, in consequence of his want of success.

DR. HYDE remarked that the question of the success of all such operations depended upon the extent of the telangiectasis. If there were superficial vessels only, enlarged and tortuous, then there might be a prospect of good results from either division or acupuncture with electrolysis. If, however, there were blood-vascular channels of any depth below the surface, the operation would almost surely prove to be a failure.

DR. HARDAWAY concluded by repeating that the use of a fine needle was essential in producing his results.

The Association, after transacting further business not of a scientific character, and listening to a brief concluding address by the President, adjourned.

The following specimens were then informally exhibited:—Microscopical slides representing various forms of disease of the skin, by Drs. Duhring, Hardaway, and Van Harlingen; a drawing of a case of maculæ, symmetrically disposed on each side of the spinal column, and hairs from a case of trichorhexis nodosa, from a patient presented to the British Medical Association, by Dr. Duhring; photographs of a case of elephantiasis arabum from Indiana, and of severe lupus vulgaris in Iowa, by Dr. Hyde.

At an informal gathering of members in the amphitheatre of the New York Hospital, on Thursday afternoon, the following rare and interesting cases of skin disease were also exhibited:—Urticaria pigmentosa; lichen planus; "scleroderma, hemiatrophia facialis and alopecia areata;" tubercular leprosy with rare pigmentation; three cases of lupus erythematosus and lupus vulgaris; two syphilitic cases; carcinoma of the skin; lichen ruber; and scrofuloderma with failure of osseous development beneath the lesions.

ARTICLE X.

CHICAGO MEDICAL SOCIETY. Regular meeting September 1st, 1879.

DR. R. PARK read a paper on "Dermatitis venenata," describing the poison ivy and giving at length its characteristics, chemical constituents and properties, with a full account of the symptoms caused by it, their duration, termination, pathology, differential diagnosis and treatment. The paper, besides giving his own experience with it, was a résumé of all the literature that he could get access to.*

In the paper the ground was taken that the eruption was simply a specific eczema, *i. e.*, an eczema with a specific ætiology,—the toxicodendric acid,—and had for its commonest type the vesicular form of the same. While there were variations in all directions from this standard, it was nevertheless the prevailing one.

With respect to the erysipelatous nature of the symptoms, as alleged by some writers, the essayest took the ground that it was very rare.. Concerning treatment, he mentioned a great variety of drugs, both vegetable and mineral, which had received the recommendation of one or another, giving such an extended list more as a matter of curiosity than of practical utility, however, and advising those who have occasion to treat the malady to select a very few remedies on which they could depend, and use them judiciously. He recommended the camphor-chloral mixture as a powerful sedative to relieve the distressing itching, stating at the same time that it was not in the slightest astringent or antiphlogistic. Hypnotics and anodynes were recommended, and saline laxatives *pro re nata.*

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* This paper appeared in full in the "Archives of Dermatology," July, 1879.

In the discussion which followed, DR. HAMILL stated that he had been called upon to treat many of these cases. and had always used an ordinary brine locally and with great success. This brine might be made with common salt, or saltpetre, or alum might be added.

DR. PAOLI insisted on the erysipelatous nature of many of the cases which he had seen formerly in Ohio, saying that in many of them there was very little of the vesicular appearance, while they did present the peculiar color and œdema of erysipelas. In many of them also large superficial ulcerations accompanied or followed the other symptoms.

DR. T. D. FITCH thought the essayist had not laid sufficient stress upon the use of laxatives; he also saw indications in this grouping of symptoms for arterial sedatives. He narrated the case of a lady suffering from ivy-poisoning who. during its course, had an hæmatocele in the right mamma. He had seen very little of anything like erysipelas in his cases.

DR. WARE stated that in his boyhood it was a very common thing for his schoolmates to be affected, sometimes very severely. No physician was called, however; some simple domestic treatment was adopted, and in a few days they were as lively as usual.

Several others mentioned cases they had seen or remedies they had tried. In conclusion,

DR. PARK said he was not prepared to admit the erysipelatous nature of the affection. Those cases which so closely resembled it he thought should be termed *erysipelatoid.* He could understand how a patient suffering from the effects of poison-ivy could be attacked with a genuine erysipelas; also that constitutional conditions might make no small difference in the characteristics of the disease; but he claimed that the picture he had drawn of the affection was in the main true and correct, and that the limits of his paper did not permit mention of every possible variation. He also held that erysipelas was a disease with a specific ætiology, of which we were yet ignorant, usually manifested at first by a chill and other significant symptoms; that in the dermatitis under discussion peripheral sepsis might cause lymphangitis or perilymphangitis, which could give rise to the appearances with which all were familiar in true erysipelas.

He said, with reference to the use of laxatives, that he thought a simple mention of their advisability would be enough to govern the physician in charge of any case of this kind. Finally, he regarded the high fever and accompanying symptoms as due very largely to reflex disturbence from peripheral irritation which would, and generally do, subside upon exhibition of the proper sedatives, general and local.

The discussion of the paper being concluded, Dr. C. T. Fenn showed a very interesting specimen of extra-capsular fracture of the neck of the femur removed nineteen months after the injury. The specimen showed grooving from pressure of tendons, some changes in the shape of the parts and an absorption of part of the shaft, allowing the neck of the bone to encroach upon and extend into the medullary cavity. The specimen was accompanied by a full history of the case.

Article XI.

West Chicago Medical Society. Reported by W. T. Belfield, Secretary.

A special meeting of the West Chicago Medical Society was held Monday evening, August 11th, to discuss the pathology and treatment of the intestinal diseases of children. Dr. Harcourt was called to the chair. There were twenty-three ladies and gentlemen present.

DR. H. WEBSTER JONES enumerated among the causes of summer diarrhœa the effect of continuous heat upon the nervous centers; errors in diet; errors in clothing (from excess as well as deficiency in attire). He also discussed milk and the various substitutes for it, and the remedies needed in conjunction with proper diet. The doctor advised the allowance of plenty of water.

DR. EARLE recognized three diseases of this class (excluding dysentery): 1st. Simple diarrhœa; 2d. Entero-colitis; 3d. Cholera Infantum—the latter being, in his opinion, a very rare disease. He laid great stress on the regulation of the diet in both prophylaxis and treatment of these diseases. He thought the necessity for medicines in these cases to be less frequent than is commonly supposed.

DR. FOSTER referred to the fact that a large percentage of his cases began during the hot weather between June 27 and July 4. Dr. Bridge thought that a child often nursed simply to quench thirst, and that in summer, water should be usually offered before nursing was permitted. Dr. Lee referred to a case of severe infantile dysentery in which the greatest benefit had been derived from iodoform suppositories. Remarks were made also by Drs. Seeley and Clarke.

This discussion was continued at an adjourned meeting held August 18th. Dr. E. Ingals remarked that the heat, in order to be productive of bowel complaints, must be continuous for several days; that the nomenclature of these diseases should not be based upon the pathological conditions present, for these are not understood. He thought that they were seldom inflammatory; and that care should be taken that diet be not neglected for physic.

The doctor usually treated diarrhœa of the lower bowel by a cathartic followed by opiates. Farinaceous foods and cow's milk are desirable. He did not despair simply because a child is bottle-fed, for he had seen children thrive admirably when thus nourished. Nor did he think that a cow was necessarily unhealthy because inactive.

DR. LYMAN thought that the varying success of remedies in these diseases might be explained by a failure to distinguish stages and varieties of the difficulty. He briefly reviewed the minute anatomy of the intestine, dwelling especially on the connection of its nervous apparatus with the larger sympathetic ganglia. The doctor regards summer complaint as a succession of three stages: (1) Irritative—resulting often from nervous irritation, either external, such as a chill, or internal, *e.g.*, green apples in the alimentary canal. Equilibrium can be often restored by a bath and opium. Later, this stage merges into the (2) Inflammatory, wherein purgatives are most successful, especially mercurials; with these can be oftentimes profitably associated alkalies, to counteract acidity. The third stage is that of atony wherein tonics are demanded.

DR. LYMAN regards cholera infantum as a disease of depression, not of inflammation; that it is due, in part at least, to foul and malarious gases; that its frequency decreases as sewerage is perfected.

DR. EARLE spoke of the similarily between the symptomatology of epidemic cholera and cholera infantum. He took exception to Dr. Jones' recommendation that a sick child should have an abundance of water. Dr. Earle often forbids water or even the breast for 12 or 24 hours. Koumiss sometimes gives excellent results.

DR. GRAHAM narrated his experience with koumiss in one case—a four-months old child—who, after six weeks steady decline, showed marked and immediate improvement when put upon koumiss.

A SOAP FOR THE PHYSICIAN'S OFFICE.—MR. E. H. SARGENT, a well-known druggist of this city, has made a thymoline soap, designed especially for the antiseptic cleansing of physicians' instruments. The soap contains a sufficient quantity of the disinfectant, and the odor of the thymoline is by no means unpleasant. In this day, when so much is said respecting the transmission of disease by surgical instruments, it will be a satisfaction to make use of an agent in cleansing them, which will at least assist in their disinfection.

Domestic Correspondence.

ARTICLE XII.

THE BRITISH MEDICAL ASSOCIATION ON THE REGISTRATION OF INFECTIOUS DISEASES.

No one can accuse our British medical brethren of any lack of zeal regarding the prevention of disease. Antiseptic surgery and public health are their favorite watchwords. But, though anxious enough for acts of parliament and for local legislation, to "stamp out" disease, they do not propose to forget that a physician is, *ex-officio*, a gentleman, and that he must be treated like a gentleman. In several of the large towns of the United Kingdom, the authorities have borrowed a Chicago idea, and have passed laws requiring a physician to report all infectious diseases in their practice. Disobedience to be punished by fines ranging from ten to fifty dollars; while obedience was to be rewarded with a fee of two shillings and sixpence or three shillings and sixpence for each report.

To the credit of our profession be it said, this attempt aroused the medical lions at once. The greatest indignation was expressed, and the British Medical Association took up the matter at its recent meeting in the city of Cork. The committee to which the subject was referred, after reciting the above facts, proceeded as follows (*British Medical Journal*, Aug. 16, 1879):

"It is greatly to be deplored that the suggestion has not been followed that was made in the first instance by this committee, namely, that the householder, or person in charge of the infectious case, should be the person required to notify the case to the medical officer of health.

"The importance of an early notification of the commencement of an epidemic is so great, that the undertaking should never have been imperiled by the enactment of obnoxious and entirely unnecessary penal clauses against medical men; and in several towns, it has already roused against it the strenuous opposition of members of the profession, by whose willing aid alone it could be carried into effect.

"There are several grave objections to the proposal to make the medical attendant primarily responsible to the local authority for the notification of the presence of infectious disease in the households of their patients.

"1. Whatever may be said as to the abstract right of the state to require this service, it is most undesirable that the confidential relation of the medical attendant and patient should be disturbed, or that the former should be placed in the position of an *informer* in reference to the affairs of the latter.

"2. It is not well that, in addition to the heavy responsibilities and risk to life attaching to attendance upon cases of infectious disease, medical men should be liable to vexatious actions at law, and to heavy penalties for alleged non-performance of a duty that lies outside of their ordinary practice, and that would be more justly and better performed by persons in charge of the cases.

"3. Such an enactment would also often tend to defeat its own ends, seeing that it would in many cases prevent resort to medical assistance, or lead to the employment of unqualified practitioners, and to more frequent application to druggists. Patients suffering from these complaints, would thus not only run much greater danger to life, but the community would be more frequently exposed to danger of infection.

"4. Any injury to trade, or to the means of gaining a livelihood, in consequence of this notification, would probably be ascribed to the action of the medical attendant, and, in case of a disputed diagnosis, might lead to further evils than mere loss of practice.

"5. It is not desirable that the extent of a medical man's practice in these cases should be made known to, and commented upon by members of the various local government boards. None of those objections apply to the plan proposed by your committee;

and if the returns of disease made by householders were sent direct to the medical officer of health, and were considered by him as confidential, the measures necessary for the protection of the neighbors could be carried out without unnecessary publicity, and much needless alarm on the part of the community would be avoided. It has been suggested that in poor districts, it might be very difficult to obtain from ignorant and illiterate persons the necessary announcement of the nature of the case; but the authoritative declaration of the nature of the case must necessarily come, in the first instance, from the medical attendant, and, if he were provided with a form that could be countersigned and forwarded by the householder, the responsibility of the latter for the notification of the case would remain with him; the medical man would simply have done his duty towards his patient.

"Inasmuch as this service would be rendered also to the local authority, he might reasonably claim to be remunerated by them for the certificate."

This report was warmly supported by the Association, and measures for carrying its recommendations into effect are to be initiated in Parliament. Such an exhibition of highly civilized feeling is extremely creditable to our English brothers. Occurring as it does at a long distance from our own country, perhaps our sanitary enthusiasts will condescend to take under consideration the lesson which it illustrates. Are we to be the only representatives of a learned profession, in an enlightened country, who will tamely submit to impositions against which the "down-trodden subjects of an effete monarchy" instinctively revolt?

H. M. LYMAN.

ARTICLE XIII.

NEW YORK CITY.

Editors CHICAGO MEDICAL JOURNAL AND EXAMINER:

In my letter from this city, published in your May number, I quoted an unfavorable opinion from the surgical staff of Roosevelt Hospital, in regard to the use of rubber bandages for ulcers of the leg. The communication seems to have found Dr. Martin in a very hyperæsthetic condition ; from which, however, I trust he was relieved by his very valuable letter in your issue for August.

Permit me to say a word in answer to it, and in defense of the Roosevelt surgeons, upon whom, I find, I have called a great deal of labored and unnecessary sarcasm.

It was not pretended in the least, that the method of treating ulcers described by me, as practiced at Roosevelt, was that advocated by Dr. Martin, nor was it assumed to be an "improvement" upon that method. It was, as I understood it, simply an experimental modification, by which it was hoped good results might be reached. The method was fully described, and no person, who had the patience to reflect, or the ability to comprehend, would infer from the statement of its poor results, that Martin's pure gum method was at all involved in the failure. The experiment was not entirely a failure either. The same dressing applied to suppurating buboes, has had remarkably good results in spite of the very shocking proximity of carbolic and boracic acids to the wounds.

Further, the remark that other surgeons, who claimed better results, had probably mistaken granulation for cicatrization, was hardly spoken *au sérieux*, nor could any mind not entirely devoid of humor, or completely preoccupied with the immense importance of pure gum, have failed to take the statement as it was meant. Fired by its apparent absurdity, however, the doctor would have us all vibrate with a noble scorn at the idea of Mr. G. W. Callender and Mr. Hutchinson not knowing a cicatrix when they see it. We consider that the doctor has undergone a very superfluous excitation of his emotional nature. No one believes, and no one seriously implied that those eminent gentlemen were not equal to the very elementary distinction referred to.

The fact is, that there has been a good deal of experimenting with the rubber bandage in this city, and much rather large talk over the wonderful results. It was this that was had in mind when the remark quoted was made.

Perhaps all this should have been explained at first, but it did not occur to me that any one would condemn Dr. Martin's pure rubber bandages, because an elaborate and fully described modification of it failed.

There have now been so many communications, extracts and discussions in regard to the bandage and Dr. Martin's views upon it, that there is little danger of any misunderstanding, or of involving him undeservedly in any failure. We would suggest, therefore, that he now let us go on and use it in peace. The medical world will have to convince itself—it will take no single individual's statement—that a whiff of carbolic acid, or a suggestion of litharge will prevent an ulcer's healing. When convinced, however, that such is the case, we all know that Dr. Martin is making the pure gum at a great personal sacrifice, and that it can be obtained of the doctor himself or his agents in London. Very truly yours,

62 W. 46TH ST. C. L. DANA.

DRS. F. C. HOTZ and E. J. GARDINER, have made arrangements at the Eye and Ear Infirmary for a course of lectures upon the *Physical and Functional Examination of the Eye.* This is a good opportunity for physicians interested in the study of diseases of the eye, to become thoroughly acquainted with the various methods of examining this organ. Each lecture will close with demonstrations and practical exercise with the focal illumination and ophthalmoscope; and in the testing of the refraction, accommodation, color, perception, and movements of the eye. Physicians desirous to take this course, may apply at the infirmary between two and three o'clock.

DR. BULKLEY announces a third course of free lectures on *Diseases of the Skin*, in the pathological amphitheatre of the New York Hospital, 7 West 15th St., on Wednesday afternoons, from 2:30 to 3:30 o'clock, commencing Wednesday, Oct. 8, 1879. The lectures will be didactic and clinical in character, going over the entire subject of diseases of the skin (including syphilis), and will be freely illustrated by colored plates, photographs, life-sized models, the blackboard, and abundant clinical material. The pathology, differential diagnosis, and treatment of diseases of the skin will be especially considered.

Editorial.

PREVENTIVE MEDICINE.—We have had frequent occasion to remark, that one of the greatest obstacles in the way of real progress in any of the departments of medical science, is the disposition of writers and investigators to accept mere opinions as facts, and to draw inferences or conclusions from an inadequate number of observations, or from observations very imperfectly made. In no department is this more strikingly illustrated at the present time, than in that of etiology in its relations to sanitary science or preventive medicine. The close relation of this department to municipal authorities, and measures for the promotion of the public health, makes it specially desirable that the profession should avoid indulgence in mere theories and hasty inferences, and should exercise the utmost patience and caution in the investigation of all practical questions, and scrupulous accuracy in the relation of facts, and the expression of such conclusions as affect the public interests. More especially should this rule be observed by such members of the profession as hold official positions as health officers, and members of the Health Boards, whether municipal, State, or national; because to them the public look for guidance, and justly expect that the opinions they express, and the measures they propose, will fairly and accurately represent the present status of medical knowledge. A failure in these particulars, has led, in some instances, to the most extravagant assertions as to what sanitary measures can accomplish in the prevention of disease; in others, to stories about disease producing *germs* in everything we eat, drink, or wear, more alarming or sensational to the public ear, than the story of the Arabian Nights to the ear of credulous childhood; and in still others, to the most reckless inaccuracies in the statement of facts, and the most tenacious adherence to preconceived theories though confronted by a thousand facts wholly irreconcilable with them. One of the most common extravagances here alluded to, is the often repeated claim of sanitarians that they can, not only, moderate the severity and lessen the prevalence of a large class of diseases including scartlatina, diphtheria, etc., but can by sanitary measures "stamp them out," or eradicate them from the community. Yet who has ever seen the promise fulfilled? In regard to the sensational stories about disease-producing germs, if the people really believed a fractional part of what has been written and published in medical journals and newspapers and duly illustrated with cuts, they would properly fear to breathe or eat, or even travel on the same highway over which a funeral cortege had once borne a body dead from scarlet fever. But the practice that does most to retard real progress is the constant exhibition of carelessness and inaccuracy in the statement of facts, not only in newspaper reports and ex-parte gossip called "interviews," but in medical journals and official documents. Take as a specimen, the following paragraph from the first page of the *National Board of Health Bulletin* for September 13th, 1879:

"Last year the intensely infected boat, John B. Porter, was an unchallenged rover on the Mississippi and Ohio rivers, and scattered pestilence broadcast for a distance of 500 miles." Such a statement in such a paper, is liable to be quoted by writers through all coming time, as reliable proof that the said boat did actually rove unrestrained and recklessly along the Mississippi and Ohio rivers, and did actually scatter the pestilence, yellow fever, broadcast, that is in every direction, for a distance of 500 miles.

But what were the facts? If there was any truth in the statement made at the time concerning the progress of that boat, instead of roving unchallenged about the Ohio, it was absolutely prohibited from landing on either shore, from the mouth of the Ohio river to Galliopolis (save at Louisville), and its unfortunate living freight was thus compelled by municipal and sanitary authorities, to keep the middle of the river until there were not enough left alive and well to direct the craft further, and they tied it up at Galliopolis, from inability to do otherwise. And where was the *pestilence* that it "scattered broadcast for the distance of 500 miles?" Can the writer of that sentence point to a single case that contracted the fever from that boat on either side of the Ohio from Cairo to Galliopolis except at the latter place where it was obliged to stop? Did any resident of Louisville take the disease from its landing there? We are told by those who ought to know that there was not one. We have not made this quotation from the *Bulletin* for the purpose of criticising any of the measures proposed by the National Board of Health; but solely as a specimen of the reckless inaccuracy of statements with which our current literature concerning epidemics, is filled; and which constitute one of the most serious obstacles in the way of all reliable investigations. Simply because they render it impossible for the investigator to know, in many instances, whether he is collating actual facts or mere fictions.

Another evil of hardly less magnitude, consists in the adoption of a particular theory concerning the etiology of a disease, and the mode of its propagation, and then doggedly rejecting every fact that appears to militate against the theory. The following will more perfectly illustrate our meaning. In the Cincinnati *Lancet and Clinic* for the 6th inst., a case of suspected yellow fever is reported, and a distinguished health officer's opinion requested concerning the diagnosis. In his reply we find the following paragraph: "The high temperature towards the last (103° F.), the yellowness of the skin, suppression of urine, and presence of albumen, are certainly strong points in favor of the supposition that the case was one of yellow fever, *nevertheless as there is no possible means of determining whether the patient was exposed to infection, the case must be overshadowed by some doubt, as such a thing as sporadic yellow fever*, or *fever developing de novo is out of the question.*" In other words, the *diagnosis*, instead of being based on the symptoms and pathological changes, is made to depend on the ability or inability to trace exposure to infection, and one of the most important questions now awaiting solution by the unbiased investigator, namely, whether yellow fever can originate sporadically or not, is dogmatically ignored. Of course, men guided by such a spirit of inquiry, will collate and credit only such facts as appear to prove their theory. Those who are predetermined to prove that the yellow fever in our country is always received from contact with infection or contagion, will take, for instance, the facts connected with the behavior of the disease at the quarantine in St. Louis in 1878, where the physician engaged in inspecting the boats coming up from New Orleans, Memphis, etc., took the disease and died, together with several of the hands employed on the ferry-boat carrying patients from infected boats to the quarantine hospital; and wherever a case occurs, the nature of which cannot be denied, and no connection with infection is apparent, they will fill the gap by *imagining* that some fruit, or rags, or something had been brought into the neighborhood, or that the contagious germs had been lying latent from some previous year. While those predetermined to maintain the opposite extreme of absolute non-contagion, will seize with equal avidity the facts connected with the behavior of the disease the same season at Louisville, where refugees from Memphis and all other infected places, were admitted with the utmost freedom, and where many got sick with the fever after their arrival, some in hotels, some in private houses, and many were taken to a special hospital under the care of Dr. Marvin, where they were attended by over twenty nurses, and were freely visited by physicians, clergymen, and even ladies, and not one of all these contracted the disease. Thus the advocates of each theory have abundant proof to sustain them, and to maintain the same controversy that was waged with so much vehemence in the days of Rush and Hosack. How much better it would be for the credit of the profession, and how much more rapid would be our progress in arriving at reliable practical results, if each one would hold his theories and preconceived opinions so far in abeyance, as to enable him to receive and give due weight to every well ascertained fact concerning the origin and propagation of any disease.

And where facts appear to some extent contradictory or pointing towards opposite conclusions, like those to which we have just alluded, concerning the yellow fever in St. Louis and Louisville in 1878, instead of using them to maintain opposite sides of a controversy, let us be more logical and assume that if persons in free communication with the yellow fever in quarantine near St. Louis contracted the disease, while a larger number and variety of persons in free communication with the same disease in the quarantine hospital at Louisville, all escaped, there must be some difference either in the habits and susceptibilities of the persons exposed in the two places, or else in the local and meteorological conditions of the places themselves. Therefore, just what constituted such difference becomes at once the paramount subject for further investigation.

That yellow fever, cholera, and all similarly epidemic and apparently infectious diseases, propagate themselves with great readiness in some localities and not in others, at some seasons of the year and not at others, is a matter of history too plain to be denied. If this is granted, then the next step is, for all officers of health, sanitarians, and physicians, to enter patiently, minutely and perseveringly, into an investigation of the reasons for such differences. The geological, topographical, meterological, and sanitary conditions of each locality, together with the habits and social condition of the people, must be studied from year to year, including alike seasons of sickness and health. By this method, and this only, can we ever hope to determine positively the efficient cause of any given epidemic disease, and the conditions on which its propogation depends. We think the members of the National Board of Health have given good evidence of a fair appreciation of the nature of the work before them; but many of the State and local boards need to be more cautious about enforcing upon the people burdensome and arbitrary measures founded on mere theoretical assumptions, and to exercise more patience and diligence in availing themselves of the results of past experience, as well as in devising and executing well considered methods of further investigation. And, above all, do we want more care and accuracy in the observation and record of facts.

USEFUL INFORMATION.—One of our readers, writing from a prominent city in the northern part of the State, objects to allowing so much space in the JOURNAL AND EXAMINER, to the proceedings of medical societies; and alluding particularly to the record of proceedings of the Illinois State Medical Society, contained in the July number, asks what possible use it can be except to enable those who were present " to sec their names in print." Thinking that this writer may be representative of a class, we will answer his question with great pleasure. The record of proceedings as published are of use; *first*, as the means of informing a large number of members of the profession that such an organization as the Illinois State Medical Society exists; that it holds its meetings annually, the last of which was in the city of Lincoln; that its last meeting was attended by delegates and members from a large number of county and other societies in the State, and that many reports and papers of value were read, discussed and referred for publication in a volume: *second*, it informed a large circle of readers what action was taken on several important questions, such as the proper mode of determining questions of insanity and care for the insane; the sanitary improvement of public schools; the maintainance of a proper standard of education for the profession, etc: *third*, by stating what reports and papers were read, and by whom, it enabled each one of our readers to see whether there were any that they would desire to have; and by giving the names of the officers elected for the ensuing year, each reader would know to whom application could be made for full copies of the transactions when published; and, *fourth*. by giving the names of the new standing committees, and the time and place for holding the next annual meeting, it enables each reader of the JOURNAL AND EXAMINER to know to whom they should send any valuable facts coming under their observation during the year, that they may contribute to the fund of professional knowledge, and assist in making the next meeting more interesting and profitable, and thereby advance the general interests of the profession. We are sorry that our friend, or any other member of the profession in this State, should not be able to appreciate any of these important *uses* to be made of the simple record of proceedings of the State Medical Society. We hope he will profit by hints here given and, not only be induced to send for the full volume of Transactions which is now just through the press and ready for distribution, but will also find his way to the next annual meeting as a delegate from the city or county society where he lives. We are certain he would be greatly profited by doing so, besides having the pleasure of seeing his own name in print.

PERITONITIS.—Some one writing from Warrenville under date of August 28th, but who forgets to sign his name to his letter, gives the following outline of a case of peritonitis. In regard to the question of perforation of the intestines, suggested by the writer, we would suggest that the symptoms given are much more indicative of *suppuration* throughout the peritoneal surface, than of intestinal perforation.

Those who have seen many cases of acute peritonitis know that at the end of three or four days the fever and pain abate, presenting a deceptive appearance of improvement, to be speedily followed by either complete collapse, or suppuration, with cold extremities, feeble pulse, and daily partial febrile reactions, ending in fatal exhaustion in three or four days. If perforation of the intestine had taken place on the morning of the fifth day, as suggested by the writer, there should have been a sudden and severe increase of pain, followed by vomiting, collapse, and death, generally within 24 to 48 hours. The case given is as follows:

"Mrs. Jane M. Curtiss, of this village, died last Tuesday p.m. after a brief and painful sickness of one week. Her disease was acute peritonitis. The entire peritoneal membrane seemed to be involved. She had sickness and vomiting, and at first, suppression of urine, and later retention. Besides the usual pain and distension of the abdomen, there was an uncommon degree of tenderness and sensitiveness over the whole surface even to the hands and feet. All these symptoms gradually subsided by the fourth day. On the morning of the fifth day she was quite comfortable. About nine o'clock she had a light bilious evacuation, not unhealthy in appearance. She immediately grew worse, began to sink, her hands and feet were cold and clammy, and she did not rally under the stimulants and quinine which she took freely. She had a slight paroxysm of fever about noon every day, and sunk lower after it every day till she died, on the evening of the eighth day. Her most severe pain from the beginning was in the region of the right iliac fossa.

Is it not probable that there was a perforation of the intestine at that point, and that it took place when the movement of the bowels occurred on the morning of the fifth day of her sickness? A post mortem examination was out of the question, as she was a large and corpulent subject, and they wished to carry the remains to Peoria for interment. There was evidently a malarial influence operating through her whole sickness. I would like to have you insert this notice or the the substance of it in the JOURNAL. It may elicit an answer from some one that has had a similar case, confirmed by a post mortem examination."

MEDICAL CLASSES.—Just as this number of the JOURNAL AND EXAMINER goes to press, the regular medical colleges in this city are commencing the active work of another collegiate year. We learn from reliable sources that the number of matriculants already registered in each, indicates a full attendance and a prosperous term. This is as it should be, for we are sure that the colleges here are as well prepared to give the student as thorough and complete instruction in all the departments of medicine and surgery; and the faculties are as faithful in exacting an honest fulfillment of their requirements, as those of any colleges in this country.

A URINE THERMOMETER FOR GYNÆCOLOGICAL PRACTICE.—Dr. Otto Küstner, of Jena, describes an ingeniously arranged instrument composed of a silver female catheter which contains in its lumen a self-registering thermometer. The catheter tapers sharply below the point to which the bulb of the thermometer reaches, and the instrument is so arranged that the thermometer can be removed if desired. The urine in passing out bathes the thermometer, and only fifteen seconds are required to bring the temperature up to the maximum, which is the same as that in the axilla, or within a fraction of it (0.3°–0.5° C. higher).—*N. Y. Medical Record.*

Reviews and Book Notices.

ARTICLE XIV.—PHILOSOPHICAL PROBLEMS IN MEDICINE.—PRESIDENTIAL ADDRESS BEFORE THE AMERICAN MEDICAL ASSOCIATION, AT ITS THIRTIETH ANNUAL MEETING, ATLANTA, GA., MAY 6, 1879. By Theophilus Parvin, M.D.

We have read this essay with great pleasure. The opening sentence of the address strikes its key-note: "Science, Literature, Philosophy and Theology are the great subjects of human study."

The aim of the author is the enforcement of the proposition that these four great provinces of investigation have almost equal claims upon the attention of the genuine scholar, and that no one can afford to plead devotion to any one or two of these fruits of the tree of knowledge as an excuse for neglect of the rest. It is very true that in all this there is nothing new; but every age and every generation of men needs the same counsel which was found needful for the preceding. Especially at the present time does such iteration seem necessary, for the great progress which has been recently made in certain branches of natural science has filled certain minds of the lower grade with an infatuated notion that physical science is pretty nearly all that one should know. The world is therefore filled with cries against waste of time in the study of literature, philosophy and theology. This, however, for the most part proceeds from those superficial students who merely skim the surface of science, compelling themselves to abide content with the observation of phenomena alone, to the utter suppression of all curiosity concerning their causes, which form the entire subject matter of philosophy and much of theology.

Dr. Parvin has done good service by showing in his own person an excellent example of the manner in which every genuine student opens his eyes to the facts of the universe. A great physician—a specialist in science—yet well informed in relation to all the other departments of human thought. In this way only is it possible for the highest perfection to be attained in this world. For want of this broad knowledge we everywhere see men stumbling along among the facts which form the basis of science, yet unable to see their connection, and missing entirely their highest signification. The knowledge of such men is full of lacunæ—vast spaces of darkness and silence—which they profess to hope will at some future time be illuminated by the progress of natural science, but which no amount of such progress alone can ever fill. It is the dry light of philosophy which is needed by these one-eyed giants, to reveal the golden statues in the darkened temple where they grope. Most fortunately, this light shines for all who desire its radiance; and we may hope that the time is at hand when it will be as fashionable to call for the "Man with the Lamp," as it now is to rest content with the indolent abnegations of a supercilious agnosticism. H. M. L.

ARTICLE XV. — SPERMATORRHŒA; ITS CAUSES, SYMPTOMS, RESULTS AND TREATMENT. By Roberts Bartholow, A.M., M.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine in the Medical College of Ohio, etc., etc. Fourth edition, revised. New York: William Wood & Co., 1879.

Dr. Bartholow's book—originally a clinical lecture—has in this fourth edition, grown to a handsome monograph of 128 pages. Although the author is "more than ever confirmed in the view" that spermatorrhœa is a "*neurosis*," his methods of treatment are wonderfully like those employed by believers in the uniform existence of local causes. I. N. D.

BOOKS AND PAMPHLETS RECEIVED.

The Nature and Treatment of Rabies or Hydrophobia. By F. M. Dolan, L. R. C. P. E. Being the report made for the *Medical Press and Circular.* Second edition; pp. 287, cl.; 1879. London: Ballière, Tindall & Cox. Chicago: Jansen, McClurg & Co.

Sexual Neurosis. By J. T. Kent, A. M., M. D. Pp. 144, cl.; 1879. St. Louis: Maynard & Bedford.

Physiology and Histology of the Cerebral Convolutions: Also Poisons of the Intellect. By C. Richet, A. M., M. D., PH. D. Translated by E. P. Fowler. Cl., pp. 170. New York: W. Wood & Co.

Medical and Surgical History of the War of the Rebellion. Part II, vol. 1, med. vol. Prepared under the direction of J. K. Barnes, Surgeon General of U. S. Army, by J. J. Woodward, Surgeon U. S. Army. Cl., pp. 869. Washington Government Printing Offices, 1879.

Transactions of the Thirty-Fourth Annual Meeting of the Ohio State Medical Society. Held at Dayton, June, 1879.

First Steps in Chemical Principles. By Henry Leffman, M. D. Cl., pp. 51; 1879. Philadelphia: Ed. Stern & Co.

American Cyclopædia of Domestic Medicine and Household Surgery. Illustrated. Edited by Sam. Payne Ford, M. D. Leather, pp. 1215. Chicago: E. P. Kingsley.

Transactions of the Medical Society of the State of Tennessee at its Forty-Sixth Annual Meeting, 1879.

Transactions of the Medical Association of Georgia. Thirteenth Annual Session at Rome, 1879. Atlanta, Georgia.

Reports of the St. Louis Medical Society on Yellow Fever. By W. Hudson Ford, A. M., M. D. Cl., pp. 320; 1879. St. Geo., O.; Rumbold & Co.

Annual Reports of the Supervising Surgeon General of the Marine Hospital Service of the United States, for the Fiscal Years 1876 and 1877. By J. M. Woodworth, M. D.

Report on Milk and Dairies in the City of New Orleans. Presented to the New Orleans Medical and Surgical Association, and unanimously accepted July 5, 1879.

The Metric System. By J. F. Baldwin, M. D. Read before the Ohio State Medical Society.

Remarks on Ovariotomy, with Relations of Cases and Peculiarities in Treatment. By Nathan Bozeman, M. D. Reprint from *Medical Record,* July and August, 1879.

Excision of Knee Joint with Cases. By Joseph Eastman, M. D. Reprint from Transactions of Indiana State Medical Society, 1879.

Reflex Cerebral Hyperæmia. By C. H. Hughes, M. D. Read before St. Louis Medical Society. Reprint from St. Louis *Medical and Surgical Journal*, June, 1879.

Atlas of Histology. By E. Klein, M. D., F. R. S., and E. N. Smith, L. R. C. P., etc. Parts V. and VI. Philadelphia: J. B. Lippincott & Co. Chicago: W. T. Keener.

The Yellow Fever Germ on Coast and Inland. A Discussion of Ship and Railroad Quarantine. Read before the Medical Association of Georgia. By H. F. Campbell, M. D. Reprint from Transactions.

Vegetarianism the Radical Cure for Intemperance. By H. P. Fowler. New York: M. L. Holbrook & Co.

Microscopical Studies on Abcess of the Liver. By J. C. Davis, M. D. Reprint from the *Archives of Medicine*, August, 1879.

A New Operation for Entropion and Trichiasis. By F. C. Hotz M. D. Reprint from *Archives of Opthalmology*. Vol. VIII., No. 2.

Sundry Facts, Opinions and Suggestions Derived from the Observation of Forty Cases of Tapeworm. By J. Bartlett, M. D. Reprint from Chicago MEDICAL JOURNAL AND EXAMINER, September, 1879.

DEFORMITIES OF MEDICAL JOURNALS.—We are pleased to find in a late issue of the *Pacific Medical and Surgical Journal*, some unfavorable comments upon the prevailing practice of inserting advertisements in the body of a medical journal. In this day, when so many sheets are merely subsidized organs of wholesale drug houses, the practice is common enough, and evidently intended to secure that sustenance at the hands of the drug man, which can not be obtained at the hands of the profession. The opinion seems to be prevalent that medical gentlemen are so stupid that they can not detect the weakness of these sheets when the evidence of it is carried on the face. Such an opinion may be well founded, but, we think differently. Enjoying, as we do, the pages of those of our exchanges which do not exhibit this defilement, we propose to keep our own equally clean.

Summary.

Collaborators:
DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY.

SURGERY.

EXTIRPATION OF BOTH OVARIES IN HYSTERO-EPILEPSY—CURE. (By D. E. Welponer, *Wiener Med. Wochenschrift*, Nov. 30, 1879.

Up to date, but two cases of spaying in hystero-epilepsy have been reported; one operated upon by Peaslee with fatal results, and another by Battey, in whom the attacks did not return after the ovariotomy.

The case reported by Dr. Welponer, the assistant at Braun's clinic (Vienna), was an unmarried woman of 36 years, *who had never menstruated.* Healthy during youth, she showed signs of puberty at 17 years, but until the 20th year, only malaise existed, without any hæmorrhage whatever at the periods corresponding to the menstrual epoch. After the 20th year she suffered from epileptiform attacks occurring at first every four, but later, every three weeks. There had never been any flow of blood, but slight leucorrhœa since the 10th year. The entire list of remedial procedures—including dilatation of the os and local treatment—had previously been exhausted by other physicians without result.

Examination showed a small uterus, with long vaginal portion in slight anteflexion. No anomalies about the vagina or ovaries. A few days before the attack the patient became depressed, slept a good deal, complained of vertigo and cerebral congestion.

These were the customary premonitory symptoms. The attack commenced in the flexion of the hand and fingers, and tonic extension of the extremities, followed at once by loss of consciousness.

Next, the muscles of the neck and trunk entered into violent clonic spasm, whirling the body to and fro as often as 100 times a minute. The attacks recurred 10 to 15 times daily, during a period of 3 to 5 days. Each attack lasted 15 to 30 minutes, and was followed by great prostration.

Of all the numerous therapeutic means employed, compression of the ovaries was the only procedure abbreviating the attack; but it was followed by local pains.

As a last resource, Dr. Braun resorted to ovariotomy according to Hegar's method, with antiseptic precautions.

The surgical history after the operation was complicated by several abscesses, one of which perforated into the vagina, so that complete recovery was protracted until the end of the fifth week.

During the five months she remained under observation after the operation, the epileptic seizures have not returned, although there is still some malaise for some days every month. The patient, however, has gained in weight, and the sexual desire has not diminished since the operation.

The removed ovaries did not present any striking abnormal appearance.

WE have received the prospectus of "*The Alienist and Neurologist*," a quarterly journal of practical and scientific psychiatry and neurology. It will be edited by C. H. Hughes, M.D., of St. Louis, Mo., and the initial number will be published about the first of January next. Terms, $5.00 per annum in advance. We know of no one more competent to conduct a journal devoted to the nature, treatment and medico-legal relation of neuro-psychic and nervous disease than Dr. Hughes. We have no doubt he will make a journal useful to the general practitioner, and we wish him success.

Items.

SCROFULA AND SCARCITY OF FOOD IN LONDON.—We copy the following from one of Dr. L. P. Yandell's letters from London in the *Louisville Medical News:*

The Children's Hospitals.—Each of the London hospitals has a separate ward and a daily dispensary for these little people, but besides this, there are more than half a dozen hospitals exclusively for sick children. I have visited the chief hospitals and dispensaries where these unfortunates are brought, and have been afforded every facility by the attending and house physicians for seeing and studying the abundant material of this kind furnished by London's innumerable poor. The in-patients are chiefly surgical cases, and scrofula forms the chief source of their diseases. Of course there are catarrhal, diphtheritic, rheumatic, syphilitic, and malarial cases, and not a few due to inanition, but most of the in-patients are there for scrofula in one form and another. In the out-patients, as in America, the chief source of the acute cases is malaria and the chief source of the chronic cases is scrofula. In the out-patients there are many cases of syphilis, but I see far less infantile syphilis in London than I have seen in France and Germany. Scrofula is the scourge of England to-day. Once the plague was terrible here, and leprosy carried of thousands of English people; but drainage and increased and improved food have banished these diseases. Malarious affections, which, in times past, were as rife in Great Britain as they are now in the unhealthiest parts of America, are much diminished in abundance, and especially are lessened in virulence by the careful surface and under-drainage that have been almost universally carried out. Smallpox, which, a hundred years ago attacked everybody, is now seldom seen. Scurvy, which carried off its thousands of victims annually till Capt. Cook discovered the anti-scorbutic property of fresh vegetables, is now almost unknown; but scrofula was probably never more widespread than at present. Its source, or at least one of its chief sources, is patent to the most careless observer. The English do not get enough fat, enough oleaginous food. This is partly due to the scarcity and costliness of butter, etc., but it is largely due to the popular prejudice against "greasy food," and I am sorry to say this false prejudice is largely shared by the medical men. The profession and the people of the British Isles have yet to learn that fat, oil in some form, or fat-making materials, are just as necessary to human health as oil is to machinery. But, sad to say, not only do the people not get enough fats, but thousands upon thousands get almost no meat, and not a few are even without bread enough to keep down the gnawings of hunger. The other day, an old laborer, seventy-six years old, who had been without work for two weeks, and almost famished for food, cut his throat with a razor. He was discovered dying, and in reply to the inquiry why he did the deed, he said, "Because I can get no work, and I have no home, no food, no friends, nowhere to go." The sapient coroner's jury brought in a verdict of "suicide while temporarily insane." Not only the aged, but the people of middle life and the young lack and suffer hunger in London; and hunger breeds disease.

By the way, have you noticed in the journals the statement that alcohol, malaria and starvation all lead to fatty degeneration, as shown by post mortem investigation? Last year, in one of the English dependencies in India, half the population of natives starved to death, and the English surgeons had a splendid field for post mortem studies.

One word more about oleaginous food. At the very best English dinners, not only is there no butter upon the table, but the vegetables are cooked in plain water, and not a drop of drawn butter is served upon them. Except a bit of fat that you may get with your meat and the oil on the salad, your food is clean of all grease. This is very bad, and Sir Henry Thompson, in two essays upon dining, published in the *Nineteenth Century*, mildly calls attention to the evil.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Oct. 6 and 20.
West Chicago Medical Society—Mondays, Oct. 13 and 27.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.

Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.

Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.

Woman's Medical College—2 p. m., Dermatological, by Dr. Maynard.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.

Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.

Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.

Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.

Woman's Medical College—11 a. m., Ophthalmological by, Dr. Montgomery.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

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[In these pages dimension and weight are expressed in terms of the Metric System, and temperature in degrees of the Centigrade Scale.]

Original Lectures.

ARTICLE I.

CLINICAL LECTURE. By PROF. S. J. JONES, at the Illinois Charitable Eye and Ear Infirmary. Reported by F. C. Schaefer, M.D., Assistant Aural Surgeon.

The diseases of the ear are classified in three divisions, corresponding to the anatomical arrangement of the organ viz:

I. Diseases of the external ear.
II. Diseases of the middle ear.
III. Diseases of the internal ear.

In order that you may fully comprehend the limits of each division, it will be well to review briefly the anatomy of the parts. The external ear comprises the auricle and external meatus to the membrana tympani. The middle ear or tympanum is an irregular cavity placed between the external and the internal ear, within the petrous portion of the temporal bone, having four irregular walls, a roof and a floor, and lined by a mucous membrane. It communicates with the pharynx through the eustachian tube. This cavity is separated from the external ear by the membrana tympani. A chain of bones, three in number, the ossicula auditus, within the middle ear, connect the membrana tympani with its internal wall, which lies in juxtaposition with the internal ear. The internal ear or labyrinth, placed next to the tympanum and separated from the latter by a thin partition wall of osseous and membranous tissue, is also an irregular cavity and contains the vestibule, semi-circular canals, cochlea and auditory nerve.

The external and middle ears, together, are recognized functionally, as conducting apparatus; the internal ear as the perceptive apparatus.

Your attention will be directed to the pathological conditions of the ear in the order named, according to the classification of Roosa.

Diseases of the external ear are:

(a.) Diseases of the auricle.
  - I. Malformations.
  - II. Tumors.
  - III. Malignant growths.
  - IV. Injuries.
  - V. Eczema.

(b.) Diseases of the auditory canal.
  - I. Malformations.
  - II. Diffuse inflammation.
  - III. Circumscribed inflammation.
  - IV. Vegetable fungous growths.
  - V. Inspissated cerumen.
  - VI. Eczema.
  - VII. Foreign bodies.
  - VIII. Polypi.
  - IX. Exostoses and hyperostoses.
  - X. Syphilitic condylomata and ulcers.

The diseases of the middle ear are:

I. Acute catarrhal inflammation.
II. Sub-acute catarrhal inflammation.
III. Chronic non-suppurative inflammation — catarrhal or proliferous.
IV. Acute supurative inflammation.
V. Chronic suppurative inflammation.
VI. The consequences of chronic suppurative inflammation.

1. Polypi.
2. Exostoses.
3. Mastoid disease.
4. Caries and necrosis.
5. Cerebral abscess.
6. Pyæmia.
7. Paralysis.

The diseases of the internal ear manifest themselves as nervous deafness, and are classed according to their causes.

Proximate Causes.

Injuries.
Hæmorrhage and effusions.
Inflammation of the membranous (labyrinth.)
External administration of quinine (?)
Concussion of the nerve and its expansion.

Remote Causes.

Syphilis.
Cerebro spinal meningitis.
Fevers.
The exanthemata.
Mumps.
Cerebral tumors.
Aneurism of the basilar artery.

Circumscribed Inflammation of the External Auditory Meatus.

This patient, aged 24, complains of defective hearing; says he has great pain and a "lump" in his right ear, and that the hearing became "dull" during the past week. He says his hearing never has been impaired before. There is no tinnitus aurium. The borders of the external meatus are very tender, pressure upon the tragus increases the pain. Upon examination with the speculum, a circumscribed swelling or furuncle is to be seen upon the posterior wall of the external auditory canal near the entrance; it is very red, so large as to almost close the canal. Frequently several of these swellings appear at the same time, or as soon as one disappears another occurs. There being no tinnitus aurium, it is not probable that there is any lesion in the tympanum. As the furuncle is very tender, it will be advisable to scarify it through the periosteum, thereby reduce the congestion, diminish the tension upon the tissues and relieve the pain. When these furuncles are small, they can sometimes be aborted by making them bleed freely, and the hardened base that remains will be removed by absorption. When however the inflammation has continued for some time and the swelling is a little "boggy," the better plan is to encourage suppuration by lubricating the meatus with vaseline, and filling the ear with tepid water, and allowing it to remain for several hours.

As soon as it softens, puncture the swelling down to the bone. The after-treatment will consist in cleansing the parts and lubricating with vaseline. Should the pain continue, the warm water may be reapplied to the meatus and kept there with a cotton plug. The continuous application of warm water has a most felicitous effect in relieving pain within the ear.

Incising the furuncle gives immediate relief. Considerable blood escapes. This will relieve the tension of the parts, and if pus should yet form, it will have a more ready exit. Occasionally granulations occur. Should any appear, later, in this case, they will be touched with nitrate of silver, but caustics should be used with care in the external meatus, for excessive use of them sometimes causes these boils to form, and as they are inflammation of ceruminous glands, disease of one gland is liable to affect the nutrition of others, and thus produce a succession of boils, just as occurs in styes in the eye-lids, and in inflammation of axillary glands. Especially is this likely to occur in atonic conditions of general system.

Inspissated Cerumen in the External Auditory Canal.

This patient may be regarded as a typical case of a very large class. She states that she became suddenly deaf in the left ear; that she has ringing noises in the ear, a feeling of fullness about the left side of the head, and is frequently dizzy. The patient uses the inaccurate term that not only the laity but also some physicians employ when speaking of impaired hearing, and which it would be well for you to guard against. Notice when the watch is placed close to the ear she hears it; surely then she is not deaf, her hearing is defective; it has become impaired, not destroyed.

In the attempt to arrive at a correct diagnosis it is always best to make the examination systematically. Having ascertained that the patient's hearing is defective, the next step will be to examine the ear and see what objective symptoms are present. Introducing the otoscope in the external meatus, it meets with resistance; this at once indicates either an unusual formation of the parts or the presence of a foreign substance in the canal. Looking through the otoscope there can be seen a dry, very dark substance, mixed with bits of hair and bran-like granules—dry epithelial scales. By probing this accumulation gently with a delicate scoop, a slightly grating sound is elicited, showing that it is quite hard; a little pressure against the impaction produces roaring noises in the ear, together with pain and vertigo. This leads to the conclusion that the plug lies in intimate contact with the membrana tympani and fills the entire canal. The meatus is very dry, and about its borders there is an accumulation of dry epithelium, resulting from the dryness of the derma, occasioned by the suppression of the secretions. This mass consists of inspissated cerumen. A very plain case, easily diagnosed, it may seem; and yet simple as it is to make a diagnosis, it may surprise you to be informed that physicians have frequently mistaken such cases for inflammation of the tympanum. There is however no excuse for this mistake. It simply argues negligence on the part of the doctor who in all probability attributed the fullness of the head and defective hearing to inflammation of the middle ear, without making an examination of the external meatus, and perhaps advised the patient to drop lotions or oils of various kinds into the ear, which tended to obscure the case and aggravate the symptoms. The suddenness of the impairment of hearing may be attributable to having gotten a little water into the meatus, in bathing, which was absorbed by the mass, and made it swell and more effectually close the passage.

The *etiology* is sometimes obsure. Among the most common causes of such accumulation are chronic non-suppurative inflammation of the middle ear and inflammation of the meatus — due to irritation produced with scoops, hair pins or other substances used to "clean" the ear, which is unnecessary in a healthy condition of the parts. The inflamed state of the skin occasions a dryness of its surface by suppression of its secretions as in fevers. This is accompanied by the evaporation of the liquid portion of the cerumen, leaving the dry residue in the canal, which in turn acts as an irritant and keeps the parts abnormally dry. It may accumulate in consequence of wiping the meatus with the end of a towel or the finger, thus forcing the wax back into the canal as it is secreted, compressing it. A slight swelling of the canal is liable to give rise to it by preventing the free removal of the cerumen which normally takes place from the motion of lower jaw.

These are among the causes that produce impaction. The largest number of cases arise from the extension of an inflammation of the middle ear to the inner portion of the external meatus. The records of this institution for the past year show that over 80 per cent. of these cases were accompanied by chronic non-suppurative inflammation of the tympanum. It becomes important, therefore, after removing the mass, to see if there is a lesion of the middle ear.

Treatment.—The removal of this dry hard substance is not always an easy task, and the utmost gentleness is called for in the effort. The meatus is to be thoroughly syringed with warm water containing bi-carbonate of soda, alkalies being the best solvent of ear-wax. The pinna is to be drawn upwards, outwards and backwards to straighten the canal, then the water is to be injected in a continuous stream from a large syringe This produces a steady pressure, and will aid materially in its removal. Any that may remain after syringing may be removed by an ear-scoop, gently manipulated. In the greater number of cases this treatment will suffice. However, occasionally cases are met with in which the impaction is such as to require no small degree of care to effect its removal without doing violence to the meatus, which would result in circumscribed or diffuse inflammation of it. This mass of ear-wax is sometimes found encased in a pocket of desquamated skin—a cast of the meatus—that by its hardness and pressure has caused absorption around it and enlarged the meatus.

After removal of such a mass it is well to keep the meatus lubricated, as with vaseline (many of the oils popularly used to soften wax and lubricate the ear are supposed to give rise to the vegetable parasite in the ear called aspergillus) thus to protect it until wax shall again be normally secreted.

Morbid sensitiveness of the ear is sometimes shown after removal of these masses. in which case it is prudent to shield it by wearing for a short time a little cotton-wool in the meatus.

Relief is at once given these patients when the mass escapes, and their astonishment at the change is great. The feeling of fullness in the head disappears, and with it the vertigo, and frequently, too, the tinnitus. The changed expression of the countenance of the patient from dullness and depression to hopefulness and cheerfulness is unmistakable.

Hard Times for Professional Men in England. — From every part of the United Kingdom we hear news of stagnation in trade, and, consequent upon this, lower wages and hardship pressing upon every class of society. The landlord cannot get his rents because the farmer is unable to make his land pay ; the manufacturer cannot run his mills except at a loss, and in many cases either stops his machinery or runs half time, thus directly affecting his operatives ; the professional man, who lives by the other money-earning classes, cannot obtain a settlement of his accounts, and we have a long chain of cause and effect springing from bad trade. When wages were high, when trade was good, and the country in the highest state of prosperity, the doctor's bill was always the last to be paid, and the long period of credit given by the majority of practitioners fostered the idea that medical men, as they had such large profits, could afford to wait for their money. Now that trade is bad, medical men are suffering very severely, and in many towns there is a positive difficulty amongst practitioners who are doing large practices, to make even ends meet. Patients are as numerous as ever, population goes on increasing, despite of financial difficulties, but money is scarce.

Who is to blame ? The answer is a difficult one. The operative might have saved more from the high wages he received in better times, and medical practitioners would also have been better off, if they had insisted on shorter terms of payment, and not given such long credit. We are waiting for the lifting of the cloud, also hoping that hard times will teach a salutary lesson.—*Medical Press and Circular.*

Original Communications.

ARTICLE II.

PERIMETRIC INFLAMMATIONS. By H. P. MERRIMAN, M.D., Professor of Medical Jurisprudence and Hygiene, Chicago Medical College. Read before the Chicago Gynæcological Society, Sept. 26, 1879.

As this is the night for discussion, and not for the reading of a paper, I am glad it has fallen my turn to give direction to the thoughts of the society for the evening.

By perimetric inflammations I intend the inflammations immediately around the uterus, and mean all of them, whether affecting the peritoneum alone or the cellular tissue alone, or both of them together.

These inflammations have long been known to the profession under the names of pelvic abscess, iliac abscess, peri-uterine phlegmon, peri-metritis, pelvic cellulitis and inflammation of the uterine appendages.

The probability is, however, that only the severer forms were recognized — those attended with a high fever and usually terminating in suppuration. Such are the cases described by Doherty, McClintock and Hardy, Churchill, West, Simpson, Madam Boivin, Nonat Aran, Bernutz, Goupil, and others.

Most of these authors seem to have expected full and complete recovery sooner or later, and to have regarded the affection as important chiefly from the severity of the suffering accompanying it.

Even Thomas says he thinks there is no chronic form of "peri-uterine cellulitis;" that either resolution takes place in two or three weeks, or the affection goes on to suppuration, which he calls a result rather than a stage of the affection.

This acute form, though important and not rare, is still not very common. Were this the only way in which the affection shows itself, I should not have chosen it for our evening's consideration.

I think it cannot fail to have struck the attention of every physician who has practiced much in the department of women's diseases, that in making vaginal examinations he frequently finds evidence of previous perimetric inflammation.

I take the liberty of mentioning some of the most common evidences:

(*a.*) The uterus immovable and surrounded by adhesions.

(*b.*) The uterus anteflexed or retroflexed and fundus adherent, but cervix movable.

(*c.*) The uterus drawn to one side, but susceptible of some limited motion, though usually with pain.

d.) The tissue felt through the wall of the vagina, thickened and tense in some places, often as hard as a piece of sole leather; this is very observable when felt through the roof.

(*e.*) Tenderness on pressure in all these hard places.

(*f.*) Some places very tender to deep pressure, where there is no appreciable hardening.

(*g.*) Patient complains of pain in the iliac regions, especially when fatigued.

These symptoms appear to indicate that a more or less severe inflammation has occurred, with an effusion of coagulable lymph which has not been fully absorbed, and with remains still of the inflammation. In other words — with all deference to Dr. Thomas — there does exist a chronic pelvic cellulitis.

The seriousness of this complication is well recognized, as to—

The suffering it produces;

The danger of new activity; and

The reaction upon other uterine ailments.

It is this chronic form of the affection which I hope will be thoroughly discussed to-night. The subject is too broad for one evening, so I shall take up but a part of it.

As to the parts involved in these inflammations, a few cases have occurred and been substantiated by autopsy where only the cellular tissue near the uterus was involved; likewise a few where only the peritoneum was affected; but I believe observers agree that the clinical symptoms are not different whether one or more than one tissue is affected. The affection may start in the peritoneum, but it usually quickly extends to the cellular tissue in contact with it, and if it starts in the cellular tissue, it cannot become very general without involving the peritoneum.

For this reason I have used the term perimetric inflammation as being more general in its signification than any of the other names. The fact that the scholarly Dr. Barnes uses it, gives it authority also, but the term cellulitis has come into such general use to signify all these inflammations that it may be well still to use it, although pathologically incorrect.

Location. — As to the location of these attacks, Dr. Thomas says: "The usual, indeed the almost invariable seat of peri-uterine cellulitis is the areolar tissue of the broad ligaments, and generally that of one side only is affected."

Dr. West says: "The cellular tissue anywhere in the neighborhood of the womb may be the seat of the mischief, but that between the folds of the broad ligament is attacked far more often than the same structure in any other situation;" and he gives a table showing the location in 52 cases: in 34 of these it was in the broad ligament, and of this number the inflammation was on the left side in 25; in four of the 25, however, both sides were affected.

In 14 cases tabled by Dr. Thomas, we find the left broad ligament affected 12 times, but three of the 12 had also the right side affected.

Dr. Emmet, who has studied this affection more than any one else, gives a table of 157 cases of uncomplicated cellulitis occurring in his own practice, and in these the left broad ligament was affected 65 times and the right 16 times.

Other observers give about the same proportions, namely, that between 40 and 50 per cent. occur in the left broad ligament; general cellulitis occurs next in frequency, then inflammation behind the uterus, lastly inflammation on the right side and pelvic abscess, which were of the same frequency.

This remarkable frequency of cellulitis on the left side is explained by Dr. Jacobi as perhaps due to the superior development of the left cerebral hemisphere, it having a better and more direct supply of blood, which it receives by the anatomical arrangement of the large vessels springing from the left side of the aortic arch, which increased arterialization renders it more fit to innervate the right half of the body than is the case with the right cerebral hemisphere. The left side of the body being less perfectly innervated, is therefore also more liable to pathological changes.

The question of manner of origin in this affection is one of great importance, and deserves our special attention. There are but two theories at the present day which have followers:

One, that the disease is usually a secondary one, arising from prior inflammations in the ovaries, Fallopian tubes or uterus; the other, that the disease, except when puerperal, is more frequently primary, spreading to the ovaries and Fallopian tubes from the cellular tissue.

The upholders of the former theory are numerous, and comprise nearly all the prominent names in modern gynæcology. Of the latter theory, Dr. Emmet is the prominent advocate. Although he stands thus almost alone, he has done so much for gynæcology, and is such a careful and conscientious observer, that his opinions are entitled to respect and proper consideration. The views he holds, if established, will revolutionize the theory and practice of gynæcology. Permit me to give them in his own language. After excepting the lesions of the puerperal state, he thus expresses his convictions:

"While the primary cause of disease lies through the influences of the sympathetic system in impaired nutrition, we must look to pathological changes in the connective tissue as the cause of the results we now regard as the original disease in the uterus and ovaries.

"I have never seen a case of ovaritis without inflammation of the neighboring tissues, and where I have had the opportunity of observing one early enough, I have always detected the cellulitis before the ovary became involved.

"We have no means of judging with any accuracy as to the condition of the Fallopian tubes during life. But the probabilities are, unless poisoned by gonorrhœa, that inflammation of its mucous membrane with that of the uterus, is secondary to some previous lesion in the cellular tissue."

In other words, Dr. Emmet believes that inflammations of the ovaries, Fallopian tubes and mucous membrane of the uterus do not occur primarily except as a consequence of the puerperal condition, of gonorrhœa, or of the use of instruments, as the uterine sound; but that it occurs secondarily, as a result of existing cellulitis. This he believes to be the rule rather than the exception.

With these views of Dr. Emmet I cannot agree. I may be pardoned for mentioning my own conclusions from comparatively limited experience. I find very frequently cases of endometritis where I can detect no trace of cellulitis by the most careful examination. Some of these cases have an abundant discharge from the uterus, with very little tenderness in its cavity; others have little discharge, but so much tenderness that the most gentle introduction of the probe gives exquisite pain, and the menstrual period of many of these is full of suffering; yet bimanual examination produces no pain in any part of the pelvis.

To three or four farther arguments which Dr. Emmet brings forward to support his views, I desire to call your attention.

He is inclined to believe that phlebitis is an important element in the causation of the affection we are discussing. Does not that make cellulitis a secondary or *even a tertiary* disease? For what is the cause of the phlebitis?

Dr. Emmet suggests the existence of a low grade of phthisis in the cellular tissue as perhaps the predisposing cause of idiopathic cellulitis. I do not know what he means by "a low grade of phthisis," as applied to the condition of the cellular tissue. If he means that the tissue is not well nourished, I understand him — otherwise not.

Dr. Emmet mentions, to support his views, the very tortuous course taken by the vessels and nerves in passing through the connective tissue to reach the uterus; they are so doubled upon themselves "that they cannot be put on the stretch or their calibre lessened by the traction from pregnancy or uterine displacement." This very fact shows to my mind that the cellular tissue in this locality is unusually protected, and has no more reason to become inflamed idiopathically than the same tissue in the popliteal space.

The pelvic connective tissue in the woman, it is true, is more liable to disease than in the male, because surrounding and in contact with organs that are subject to greater variations in blood and nervous supply, but not because these vessels and nerves pass *through* the connective tissue on their way to the ovaries and uterus. For these reasons I should expect disease of the connective tissue to be secondary.

I cannot see why idiopathic or primary cellulitis should arise any more frequently in a woman than in a man. Cellulitis does occur in the male sometimes, but it always follows inflammation either of the prostate, of the urethra, or of the rectum, or some surgical injury. In other words it is either by continuity or by reflex action. I have yet to learn of any idiopathic cases.

Cellulitis has occurred both before and after the child-bearing period, but all authors agree that this event is rare. Dr. Emmet accounts for it by saying that after the menopause there is a diminished supply of blood to the uterus and ovaries. This explanation does not seem sufficient, according to his theory, for although the supply *through* the connective tissue may be diminished, yet the supply *to* it is kept up as well as formerly.

After careful consideration of the whole subject, the conclusions of Dr. Matthews Duncan impress themselves upon my mind with renewed force. In his most excellent work upon perimetritis and parametritis he says :

" The cellular tissue and the peritoneal membranes are protected and are believed to be specially disinclined to original or idiopathic inflammatory action. Why then are they so frequently inflamed in this region ?

" The theory on which I insist is that these inflammations are all secondary ; that they are produced by inflammations of the uterus or of the Fallopian tubes or of the ovaries, or by noxious discharges through or from the Fallopian tubes or ovaries, or by mechanical injury. Without one or other of these causes the inflammation and abscess is not observed.

"Of all the prolific causes, inflammation of the mucous membrane of the womb is, in my opinion, the most common, and this both in the puerperal and non-puerperal states."

What, gentlemen, are your opinions upon this subject?

Again, what shall our treatment be for this condition? Dr. Emmet's suggestions seem to me the very best that can be followed. They are:

Hot water injections twice a day.

Good, nutritious food.

Regulation of bowels.

Sunlight and fresh air.

A great deal of rest, especially if there is much tenderness.

Suitable support to the pelvic contents.

Tonics and alteratives.

The judicious use of these, combined with proper kinds of exercise when tenderness is diminished, will help most cases.

ARTICLE III.

ULCERATED CANCER OF STOMACH. I. History of case of Rev. Wm. McCullough, Gore's Landing, Ontario, by W. L. HERRIMAN, M.D., L.C.R.C.P.M.S., Port Hope, Ontario; II. Clinical record, by J. R. MCCULLOUGH, M.D., Chicago, Ills.; and, III. Autopsy record, by DRS. HERRIMAN, MCCULLOUGH and GEO, RIDDLE, of Cold Springs, Ont. Autopsy made September 21, 1879, by said gentlemen.

I. *History.*—The Rev. Wm. McCullough, sometime in February, 1879, received an injury by being thrown from his cutter. In March and the subsequent months he had pain in the stomach, chest and kidneys, constipation and occasional vomiting without nausea. A slimy or thin fluid would come into his mouth and then he would vomit; perhaps once a week or fortnight. He generally vomited food with "slime."

In the second week of June, he had occasion to drink freely of cold water, to allay a bad feeling in his stomach. He soon vomited and threw up what was black as tar, with a good deal of pain. Frequent vomitings continued without any assignable cause. The first ejected portion was often a little food, then came a great quantity of liquid, with dark material floating in it, watery and very gluey or ropy. He knows that he vomits a great deal more than he takes into the stomach ; often a week elapses between these attacks. He feels relieved after free vomiting, and is quite sure the ejected matter is not bile. The taste and smell of this are quite offensive. On last Tuesday (August 12) he had a chill and trembling, when he vomited freely, and then first saw a tinge of bile. On Friday, the 15th, he vomited again, but no bile ; it was a dark brown-colored mass. His wife said that it was very ropy. The patient did not feel relieved after this attack, as after others, but vomited again on Sunday, the 17th, and was much prostrated all day. He has had hiccough continuously for the last twenty-four hours, and more or less every day for several weeks, having taken no nourishment except twice a very little beef tea, since last Thursday (5 or six days). On Saturday he drank half a cup full at a time. On Tuesday, the 19th, he threw up some undigested pearl barley, which was taken in some chicken broth a week ago ; also a berry of the black currant, taken in the month of July. The food he vomits is generally unaltered. The stool of to-day (August 19) is reported as "black as tar," and of about the same consistency. He began to emaciate some months ago ; in May last noticed he had lost a great deal of flesh, and has continued to lose flesh and get weaker ever since. I think I can discover a small induration at the pyloric orifice of the stomach, the hardness being not very decided. It is either an abscess or a cancer ; also a rounded hardness, which I take to be in the region of the gall bladder. I can press the width of two fingers freely up under the right ribs, in the region of the liver, which causes pain. There is no enlargement of the liver. There is trouble at times to make water ; it causes him great pain ; sometimes the urine dribbles and sometimes flows freely. He does not sleep well, though there is no constant pain. Tongue slightly coated, a little red at tip.

Aug 25.—I visited him Saturday, the 23d, and still found him feeble, yet his pulse keeps as good as could be expected.

Hiccough, I think, not quite so bad ; still vomits, he says, everything. But I cannot believe that there has been much, if any, of the dark flocculi, as at first, or that he has passed any dark, tarry stools since the day I visited him, as reported to you (Aug 19). Some slight tendency to looseness in discharges, for which I ordered enemata of tr. opii and starch, omitting the pills. I continued the quinine and bismuth and morphine when required. I wrote Dr. Riddle to give some musk or carbolic acid, according to suggestion. I do not find in to-day's examination any particular indication of enlargement at the pylorus, as I wrote before that I thought I could detect some slight enlargement—possibly there is none. What I felt may have been from some other cause. He does not seem to suffer from any great pain. I tried to have more hope, but must say that the case as a whole has a very unsatisfactory aspect to me. I expect to see him on Wednesday (Aug. 27th, 1879) again.

W. L. HERRIMAN, M.D., L.C.R.C.P.M.S.
JOHN ST., PORT HOPE, Ontario.

2. *Record.*—Aug. 27th, 1879.—I arrived at the landing in answer to a summons, expecting to find Mr. McCullough dead. Found him resting and comparatively free from pain. He recognized me. There was slight uneasiness at the œsophageal orifice of the stomach. I found a tumefaction at lower curvature of the stomach and to the right of the median line, which was causing him much pain. I thought it to be within the transverse colon. He had been vomiting and had hiccough about every 12 hours, from 1 to 3, morning and afternoon. The looseness of bowels of last week ceased without the aid of the enema of tr. opii and starch as ordered by Dr. Herriman. Mrs. McCullough reported that the stools looked like matter and were very offensive. I sent a telegram to Dr. Herriman to meet me in consultation to-morrow.

Thursday, Aug. 28th.—Drs. Herriman, Riddle and myself consulted in regard to the case, and found decided enlargement at the pylorus. We concluded to change the treatment and give sodæ hyposulphite twice in 24 hours, to overcome the fermentation, alternated with salicylic acid twice in 24 hours; nourishment with enemata of beef-tea alternated with yolk of egg and milk beaten together, thus giving the stomach rest.

Friday, Sept. 5th.—He has passed the whole week without vomiting or hiccough, has slept much, suffered from occasional nausea, attended with much pain. We administered brandy and water freely, and kept his mouth cool with ice. He has been enabled to retain the beef-tea during the past week.

Saturday morning, Sept. 6th.—Hiccough returned about one o'clock this a. m. violently, succeeded by excessive vomiting of a dark ropy fluid. We discontinued enemata of nourishment in consequence of the pain caused in the region of tumefaction.

Tuesday, Sept. 9th.—Have ceased all treatment, administering only brandy and water. The vomiting continues to return about every 12 hours; lasting, off and on, for about 2 hours. The lower extremities are cold. He continues to micturate about every 5 or 6 hours. The urine is scant and very red. He is growing weaker with each vomiting attack.

Friday, Sept. 12.—Excessive hiccough and vomiting—considerable flapping of the tumefaction with every hiccough. Just preceding the vomiting, there has been audible a distinct sound in the stomach, as of a liquid pouring out from a vessel. Then there is a vacancy and stare in the eye—a death-like pallor of the countenance; pulse very low and thready, almost imperceptible; then an impulse of hiccough and then vomiting of pus. The dark-colored vomit has ceased. He passed to-day with vomit—a black currant. He bade us all farewell, and is evidently dying.

Monday, Sept. 15th.—He still lives, declines brandy, and only takes it when insisted upon. After vomiting, tongue swollen, mouth very sore, jaws so weak he has difficulty in swallowing. He lay all day in a stupor until 7 p. m., when the vomiting returned. The hands were constantly in motion over his chest and stomach. He has micturated scantily, twice during the day.

Friday night Sept. 19th.—At one this a. m. he had a severe and exhausting vomiting, the amount discharged being larger than on any previous occasion, and of the same purulent character. He rested during the forenoon and until 1 p. m., when the vomiting and hiccoughing returned. At 2 p. m. it ceased, but acute pain followed in the back, over the stomach and chest. About 3 p. m. he showed signs of nephritic pains, hands constantly over the bladder; had not micturated since 3 a. m. Wednesday morning. I inserted the catheter and drew off about 4 ounces of urine, with relief, and administered an hypodermic injection of morph. ($\frac{1}{8}$ grain) over the stomach. In a half-hour he was quite relieved, and remained so until death occurred at 9:30 p. m. He had micturated involuntarily, very freely (judging from the appearance of the clothing.)

J. R. McCULLOUGH, M. D.

CHICAGO, Ills., U. S.

III.—*Record of Autopsy of the Body of Rev. William McCullough, Gores' Landing, Ont., Sep.* 20, 1879.

An opening into the abdominal cavity was made by an incision from the ensiform appendix of the sternum downwards to within two inches of the pubis, laterally in a line with the lower ribs about five inches each way. I found a scirrhous tumor or sac about the size of a goose's egg, suspended from the small curvature of the stomach, near to the pylorus, by adhesions. The tumor was vascular, thick and nobby, with the surface ruptured, and thick purulent pus exuding from it.

About two inches from the pyloric orifice we found several white nodules, from the size of a pea to that of an acorn.

The stomach, on its lower surface, exhibited extensive adhesions, also around its pyloric portion. It crowded into the left hypochondriac region quite to the left of the median line. The liver was crowded upward and contained white nodules resembling cicatrices.

Immediately behind the duodenum we found a large nodular mass, about the size of a cocoa-nut, with adhesions to the duodenum. The duodenum was extensively adherent to all the surrounding parts and totally obstructed. While prosecuting the dissection, the contents of the stomach became discharged, in consequence of ulceration of the coats. It was evident the fluids were retained during life by the extensive adhesions, and on account of these adhesions we found great difficulty in dissecting out the stomach. We removed the whole mass, consisting of the stomach, liver, pancreas, spleen and kidneys.

Upon opening the stomach, we found a number of seeds, some lemon, black currant and tomato; there was also in the stomach a large quantity of purulent matter; the inner surface was much congested.

About one-half an inch from the œsophageal orifice, was situated a perforating ulcer, the size of a silver dollar, having extensive adhesions to the diseased pancreas. The opening of this ulcer was filled with sloughs from the pancreas (in these sloughs were a number of the same kind of smaller seeds) into which could be traced a number of sinuses, leading to absesses in that organ.

The pyloric orifice was nearly surrounded by a corroding ulcer, occupying at least three-fourths of its circumference, and extending into the duodenum about half an inch.

At the entrance into the duodenum, were found three or four excrescences surrounding the orifice — and a multitude of the same kind of seeds.

The kidneys each contained cysts, each kidney having one cyst as large as the half of a hen's egg and formed immediately beneath the cortical covering and considerably at the expense of the kidney, being three-fourths of an inch deep and one inch long in its substance; the other cysts were smaller.

The gall-bladder was full of bile and much discolored.

The liver contained four small but deep seated abcesses upon its under surface, and six upon its upper surface, one of which upon being ruptured, discharged about two fluid drachms of viscid pus. These abscesses were the cicatrices spoken of before.

The bladder was not removed from its position, but an examination of it by the hand, indicated hardness with the same cystic feeling as the kidneys.

ARTICLE IV.

A NEW UTERINE DILATOR.* J. O. HOBBS, M.D.

The idea of dilating the os uteri by means of an impervious sack or bag, introduced in a collapsed state and afterwards expanded by pumping in air or water, was known to Walbaum, who recommended the use of a pig's bladder for this purpose, about the middle of the last century. Barnes' dilators, which are simple rubber bags, are efficient in cases where the os will readily admit a large instrument and the resistance to be overcome is slight. Aside from being bulky and, therefore, difficult to introduce, they have another objectionable feature, viz., that of "pocketing," or distending indefinitely in the lines of least resistance when in use. With them the force used is expended in the dilatation of the rubber bag, the force exerted on the strictured part being measured by the elasticity of the walls of the sack.

Molesworth's dilators are rubber bags having threads imbedded longitudinally in their substance. They have the fault of pocketing in common with the Barnes' dilators, notwithstanding the claim of their inventor to the contrary. The longitudinal threads do not prevent their expansion laterally on either side of the constricted part, until the bursting point is reached.

Attempts have been made to obviate this difficulty by bandaging that part of the dilator which is external to the os, the portion of the sack within the uterus being left to expand indefinitely. It would be difficult to conceive of a more dangerous practice.

A case of rupture of the womb from the use of Molesworth's dilator has been reported. Molesworth's dilators are more powerful than Barnes' bags because they are made of heavier rubber, irrespective of the longitudinal threads. They require the use of a screw force pump to distend them.

The dilator which I have devised is essentially a sack of thin inelastic fabric rendered impervious to air or water. As it is now constructed it consists of two sacks, one inclosing the other. The outer one is made of strong silk or linen, coated externally with rubber to prevent absorption. The inner sack is of the thinnest rubber. These are fastened to a perforated collar of metal from which a flexible probe is extended within the cavity. This collar makes a screw attachment to a small metallic tube provided with a stop-cock. This tube serves as a handle to the probe and can be connected at pleasure with a Davidson's or fountain syringe, or the air bulb of an atomizer.

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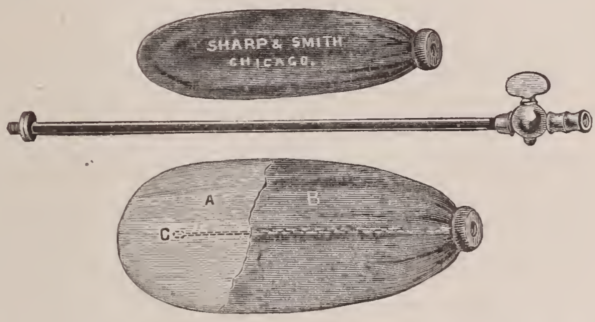
* This dilator was exhibited to the Chicago Society of Physicians and Surgeons, February 12th, 1877.

When in use these dilators expand to a limited size of the os. The force applied is solely expended in overcoming the resistance of the tissues constricting the sack. No power is lost in expanding the sack as is the case with the rubber bag, and for this reason they are very powerful dilators. With one of them I have dilated an artificial os of rubber of four times the thickness of one that could not be dilated with Molesworth's instrument. In making this experiment I used the common air bulb.



In practice I have used this dilator in two cases. The first instance was for the purpose of exploring the uterus of a woman who had suffered many years from metrorrhagia. The os fairly admitted the smallest sack which connected with a fountain syringe, suspended about five feet above the bed. At the end of three hours the os was dilated to the full size of the sack, permitting the removal of a fibroid polypus seven-eighths of an inch in diameter.

The patient was not anæsthetized during this gentle dilating process and complained but little of pain. The second case was one of abortion, in which the placenta and membranes had been retained for several days after expulsion of the fœtus. The same means to dilate the os were used as in the first case. Pressure was applied for a little more than an hour, shutting off the water now and then as the patient complained of regularly recurring pains which she described as being like those of the first stage of labor.

The advantages which I claim for these dilators are: 1st, Their small size and pliability when collapsed; 2d, Their fixed shape and size when distended; 3d, The direct application of force, which enables the operator to obtain satisfactory results with the least expenditure of power.

ARTICLE V.

ABSTRACT OF ADDRESS DELIVERED AT THE OPENING OF THE COURSE OF LECTURES IN RUSH MEDICAL COLLEGE. By C. T. PARKES, M.D., Professor of Anatomy.

Best known among the surgeons of Guy's Hospital, is the author of the popular treatise on surgery, Mr. Thomas Bryant. Mr. Bryant is the most ready and finished lecturer on clinical surgery in London. He is a graduate of the school in which he is the most noted surgeon, is a man of very methodical habits and a prolific writer, keeping up his early practice of making a written abstract of every case which presents anything new or interesting in its history. No man can present more trustworthy statistics in support of any proposition adduced, or more readily recall precedents to justify any course of procedure adopted.

It was my pleasure to listen to the masterly address of Mr. W. S. Savory, one of the surgeons of St. Bartholomew's Hospital, the subject being "Antiseptic Surgery." He was fortunate enough to stir up an enthusiasm which is seldom witnessed in British assemblies. The responses which he succeeded in eliciting did no more than justice to his classical oratory, as well as to the exceedingly interesting and commendable subject matter of the address.

Much of the success thereof was undoubtedly due to the manner of the man himself. Polished, suave, elegant in action and speech, all his attributes show through his quiet simplicity and earnestness, absolutely free from the least particle of demonstrativeness or display. His smooth, clear face exhibits striking lineaments and they speak with such straightforward honesty and impressive thoughtfulness, the fullest measure of the listener's confidence is instantly secured and retained. You feel that every sentence uttered by his lips comes backed up with the support of thoughtful consideration and wisely elaborated experience, while the story is told so plainly, so free from all subterfuge or disingenuousness, that conviction of its trustworthiness is forced upon you. Again, antiseptic surgery was a subject to gain everybody's ear; treating, as it does, of principles in the care of wounds, which have excited more attention than any heretofore presented to the consideration of medical men.

The claim was made that as good results could be obtained by the judicious use of rest, cleanliness and abundance of fresh air, in the treatment of injuries, as ever followed the use of Prof. Lister's method of carbolization; further, it was claimed that the theory of exclusion of elements of fermentation in such treatment, did not reach the necessities of all cases, that it was harmful to some; and, that there was much in the condition of the wound itself sufficient to work bad influence, against which the gauze furnished no protection.

That these hurtful accompaniments were best avoided by adopting means to solicit union by first intention, by the free use of pure water and by the establishment of easy drainage by position to prevent auto-infection.

The claims were supported by clear arguments and wonderfully excellent hospital statistics. This was not based upon a trial of Mr. Lister's method, for that was practically ignored. There was no comparison of methods of treatment but merely an enunciation of the simplest plans of procedure that can possibly be adopted in the treatment of wounds, with a statement of the grand results worked out of the means used.

It was no attack on Mr. Lister; only an exposition of another way — certainly much easier and claimed to be as safe — to reach the great aim for which both men have been striving — the saving of human life and prevention of human suffering. No man, no assemblage of men, can ever deprive Mr. Lister of the just fame ever to be associated with his name in repayment for the elucidation and introduction of principles of treatment which have revolutionized surgical practice and so widely extended its field of relief and usefulness.

My own view, gentlemen, is that one objection to the gauze dressings lies in the disturbance of wounds during the re-application of them. The opinion is hazarded that if Mr. Savory would make use of Mr. Lister's antiseptic principles and dressings, and so modify their application as to allow to the fullest extent the employment of the very valuable principle of undisturbed rest, then his statistics would show still greater victories over the ravages of septic poisoning. * * * *

St. Bartholomew's Hospital was founded in 1123 by one Rayhere, a minstrel to Henry I. He made his money and obtained his possessions by singing songs to "my lords and ladies." In later life he took up the role of Prior, and among many other ways of doing good, established this home for the sick. In 1544 Henry VIII re-endowed and re-established it, being "moved thereto with great pity for, and towards the relief and succor and help of the poor, aged, sick, low and hurt people, lying and going about begging in the common streets of the city of London and the suburbs of the same, and infected with divers great and horrible sicknesses and diseases."

It is the richest and oldest of London's hospitals — the best patronized both by patients for its beds and pupils in its college.

Although many changes have certainly been made in the buildings during the years of its existence, still its walls must be reeking with bacteria, the fermenting seeds left by the hosts of patients who have received care and attention during its lifetime, in spite of its outward show of extreme cleanliness. Surely it is a justifiable pride which boasts of the success of treatment carried out within its wards, and speaks in tones of the highest commendation of the worthy men who have had supervision of them and the care of their inmates.

One of the surgeons of this hospital, a genial, kindly gentleman — of whose practice I saw a great deal — is Mr. Geo. W. Callender. He is a brilliant operator, a zealous student and a most earnest and practical advocate of the benefits of *rest*. For, it *is* providing for *rest* to dress a limb so that no quivering muscles shall pull asunder the delicate bonds holding together freshly wounded surfaces — it *is* providing for *rest* so to plan any necessary incisions as to secure a dependent opening, to obtain ready drainage for all waste fluids and preventing the harmful separation of coapted flaps, and avoiding the danger of the dire consequences resulting from absorption by open-mouthed vessels. Not the least of his brilliant attributes is his kindly nature and full-hearted sympathy, which keeps alive his devotion to these all-powerful of nature's indications, causing him to be unceasing in his vigilance to bring comfort and ease to every suffering patient who falls into his hands.

It is hardly necessary to say anything of the adjuncts, purity and abundance of air and of absolute cleanliness. Their necessity is so self-evident that no words are required to impress the importance of their usefulness or the dreadful consequences sure to follow their absence or even scanty provision. So, here in this best and oldest of hospitals, it was my privilege to see exemplified and put into practice, with results grand beyond comparison, the very principles so ably, earnestly and repeatedly insisted upon by an honored preceptor and respected colleague within the walls of my own Alma Mater. It was among the most delightful experiences I ever enjoyed. It made me alive to the knowledge which was really my own, but which I had never fully appreciated or developed. Knowledge of any kind, no matter how long owned or possessed, is but a cumbersome adornment, unless put to use by practical application.

The French are afraid that the invention of their countryman, M. Guillotin, for the extermination of criminals, may be supplanted by that of an American named Packard, who has devised a box, in which the criminal is rapidly asphyxiated by carbonic oxide gas.

Clinical Reports.

Notes from Private Practice.

Article VI.

A Bone in the Larynx for Eight Months — Spontaneous Expulsion and Recovery.

Mr. S. E., æt 46, single, cook, applied last January at my clinic for diseases of the chest and throat, in the Central Free Dispensary, in consequence of hoarseness, dyspnœa and spasmodic cough.

An examination with the laryngoscope revealed a state of general congestion of the larynx with a diffused swelling about the size of a hazelnut, involving the right ventricular band, ary-epiglottic fold and right half of the posterior wall of the pharynx. The throat was so sensitive that a thorough examination was impossible.

Local astringent applications were made, and anodynes were given to relieve the severity of the cough, and chlorate of potassa was freely administered internally. After three or four weeks, the swelling continuing, and a hard external swelling also appearing over the right side of the larynx, it was thought best to place the patient on anti-syphylitic treatment, as his history pointed to a specific origin for the laryngeal trouble. The patient seemed to improve on this treatment, but after a few weeks the difficulty with his throat increased, and as he was unable to work and had no home, he was sent to the Alexian Brothers' Hospital, where he was under the care of Drs. Baxter and Hooper.

The external swelling was opened, but discharged little; the opening, however, did not heal. The patient left the hospital for a time, but soon returned again, and nearly all the time until

July, continued to take iodide of potassium, and occasionally tonics, until the 29th of the month, when, during a spasmodic cough, he expectorated a fragment of bone which seemed to be part of the clavicle of a barn-yard fowl. The bone was an inch and a quarter in length and quite sharp at one of its extremities.

The patient gave no history of having swallowed a bone, and he has not the slightest recollection of the accident. After the expulsion of the bone, the external wound in the neck promptly healed, the coughing ceased and convalescence was established so that the patient was discharged in a few days.

I saw the patient ten days after the bone had been expelled, and found him in perfect health with no evidence of his former disease excepting slight induration about the external cicatrix, and a diffused swelling of the right half or two-thirds of the posterior pharyngeal wall and slight swelling of the right side of the larynx.

This bone must have lodged in the pharyngo-laryngeal sinus of the right side, in which position foreign bodies of this character, as pins, fish-bones, etc., are very apt to be entangled. It is not singular that the bone remained so long, but it seems almost incredible that a person should get a foreign body of its character into the throat without any knowledge of the accident.

E. FLETCHER INGALS, M.D.

188 Clark St., Chicago.

ARTICLE VII.

Hereditary Variation in the Radial Arteries.

The following diagram is the result of an examination of the radial arteries of Mr. J. W Brown and his family; and is such a remarkable example of hereditary transmission of an anatomical peculiarity that I cannot forbear asking space in the pages of the JOURNAL AND EXAMINER to publish it:

In the normal condition the radial artery passes along the inner side of the supinator longus muscle; on arriving at the wrist, "it winds backwards, round the outer side of the carpus, beneath the extensor tendons of the thumb;" but in the members of this family, consisting of grand-father, children and grand-children, 22 in all; in 15, one or both radial arteries take an abnormal course. Out of 44 arteries the same abnormal course is taken 19 times. Four times both arteries are abnormal, seven times both are normal. Twice the right only is abnormal, and nine times the left only is abnormal.

The deformity is similar in all the cases. The artery takes the usual course until within 3 to 4 centimeters of the wrist (according to the length of the arm), when it suddenly turns backwards over the supinator longus muscle, passing on the outside of the extensor tendons of the thumb and above the styloid process of the radius, thence behind the thumb into the palm, to form the palmer arch, etc. Grand-mother, daughters-in-law and sons-in-law all normal.

Grand-father.	Children.	Grand-children.
G. W. Brown, Sr., both abnormal, and very crooked.	Mr. J. T. Brown, oldest child, left abnormal.	O. F. Brown, right abnormal. A. P. Brown, both normal. J. E. Brown, both abnormal. M. E. Brown, both normal. H. F. Brown, right abnormal.
	Mrs. Barnette, second child, left abnormal.	Willie Barnette, left abnormal. Junia Barnette, left abnormal. George Barnette, both abnormal. Gertrude Barnette, left abnormal.
	Mrs. Ameter, third child, left abnormal.	Has no children.
	Mr. F. S. Brown, fourth child, left abnormal.	Has four children, all normal.
	Mrs. G. W. Brown, fifth child, left abnormal (married a man whose name is Brown.)	C. P. Brown, both abnormal. M. F. Brown, both normal.
	Mr. G. W. Brown, jr., sixth child, left abnormal.	Has no children.

Observe that in the " children " the left artery only is abnormal. Observe also in the family of Mr. F. S. Brown, who has four children, but none have the abnormality, in his own case the left is abnormal.

J. Schneck, m.d., Mt. Carmel, Ill.

Article VIII.

Paralysis Following Labor.

I was summoned to attend Mrs. F—— in her third confinement. Upon my arrival at her home at about midnight, I found her in the first stage of labor. The first pain was noticed at about ten o'clock — after she had retired for the night. I made a digital examination, and found the os dilated to about the size of a silver quarter, and very soft and moist. The vagina was very moist, and completely relaxed; the vertex R. O. P. presenting. In fact, everything promised well. In answer to her questions, I told her that she might expect a speedy termination of her labor. Dilatation of the os continued to advance rapidly, and it was noticed that true labor pains were taking place. In her previous labors she informed me that she always had great difficulty; that the labors were much protracted; one of her labors (as she expressed it) being dry; that her children were always large; that she labored from two to three days, and expressed herself as very thankful, that she was to have a speedy and, as she hoped, an easy labor. At about one o'clock complete dilatation of the os had taken place, and rupturing the membranes, the head passed into the pelvic cavity. In a short time I discovered that the head had become impacted, and she soon began suffering severe neuralgic pains along the course of the sciatic nerve, followed by severe muscular contractions of the right limb. I informed her of what had taken place and what was required. As I had unfortunately left my forceps at home, I immediately despatched a messenger for them, that I might have them as soon as possible, if I did not succeed in overcoming the impaction. During the intervals of uterine contractions, I succeeded in pressing the head up and out of the pelvic cavity, and supporting the anterior portion of the head until the next contraction, I allowed the vertex to dip down into the pelvic cavity. My efforts at overcoming the difficulty were successful, for during the following one or two contractions I believe the head passed the original point of impaction. But during the uterine contractions following, which were exceedingly severe, the head unfortunately became fixed again so firmly that I could not dislodge it. The neuralgic pains and muscular contractions returned much more severely than before. Very fortunately the messenger soon returned with my instruments. Applying my forceps (Hodge's) immediately, I delivered without delay a 12½ lb. male child. The pains and muscular contractions in the limbs were immediately relieved, followed by numbness through the entire limb and paralysis of that limb which remained some four or five months, but finally gave way under treatment of electricity and friction to the limb and sulphate of quinine and strychnia internally. Otherwise she made a good recovery, and was sitting up on the 10th day as was her custom.

The labor was completed at about four o'clock a.m., about four hours after my arrival.

E. A. Hall, M.D.

Odebolt, Iowa.

Article IX.

I. Tinea Kerion.

Master Charley S., aged 9, came from the country to the office March 31st, 1879, presenting, on the crown of the head, an oblong tumefaction two by three inches. This had been first noticed three weeks previously and treated by domestic and other remedies, without in any way apparently interfering with its progress. It was crusted over and gave such undoubted signs of fluctuation, as these cases often do, that I opened it, but instead of a free discharge, there could only be pressed out a muco-purulent gummy substance. The swelling was quite tender, as well as the scalp immediately surrounding it. There had been some tenderness of the scalp noticed for some time before the disease was discovered. He complained of loss of appetite and of feeling tired. The patient presented several other spots of the disease as large as a finger-nail on other parts of the head, that resembled impetigo. The parents were directed to shingle the the boy's head. Apply olive oil freely at night and a poultice during the day, and return in two days.

April 2d.—Removed the poultice, and with it came away the crust and all the hair from the diseased spots, revealing a raw boggy honey-combed surface, exuding a muco-purulent, gummy substance, varying in color from chocolate to yellow. All the hairs were removed bordering on the diseased spots and epilating forceps were given the parents to continue the process on all loose hairs. The following lotion was ordered to be applied several times a day:

℞ Hydrarg bichlorid		12
Sodii hyposulphitis	8	
Aq. rosæ	128	

M.

Also to take internally 10 minims of syrup of iodide of iron after each meal, in water.

April 5th.—But slight discharge from sore. Swelling much diminished. Healing at circumference. Soreness mostly gone. The smaller spots entirely healed. General health and appetite much better. Same treatment continued.

April 9th.—Swelling entirely gone. Scarcely any discharge. Boy complains of spot itching. Same treatment continued.

April 30th.—Patient cured. Surface smooth and shiny with soft, fine hairs returning around the borders. Ordered a stimulating lotion of

Tr. cantharides	8
Tr. nuc. vom	10
Tr. capsici	4
Glycerine	32
Aq. cologn	74

June 30th.—Hair growing nicely over entire surface.

Microscopical appearance of diseased hairs.

Kerion is simply an aggravated form of tinea tonsuranus or ring-worm of the scalp, due to the presence of the trichophyton. A microscopical examination of the hairs shows them to be permeated with spores and mycelium, even as in these we examined, to such a degree as to rupture the hair. Where sufficient inflammation exists at the roots of the hairs to produce suppuration the disease resembles sycosis.

Two or three other children in the neighborhood of my patient were similarly afflicted, as nearly as I could learn. Some of them were cured by borrowing my patient's bottle, and the others by the application of lime water. As they all attended the same district school, they probably acquired the disease by exchange of caps.

II. *Pustular Eczema of Scalp.*

Mrs. C., aged 26, sent for me, June 15, to see her, on account of a disease of her scalp which some one had called erysipelas, but as it did not exactly correspond to their notions of this disease, I was called. Mrs. C. is thin and tall ; had always enjoyed good health until recently, when she has been suffering from general debility. She never had had any skin disease except eruptive fevers. Her mother had suffered from varicose ulcers a year or two previously, which healed readily under the solid rubber bandage. The present attack was preceded by chill, headache and bone-ache. There first appeared, a few days previous to my visit, a crop of pustules in the occipital region, accompanied by much tenderness, heat and pain, with enlargement and soreness of post-cervical glands, some of which were suppurating. There were also two patches in parietal region on either side of median line, each about 7½ ctm. long by 2½ ctm. broad, considerably elevated above the surrounding surface, presenting a suppurating, uneven, infiltrated, honey-combed appearance, much resembling the kerion in the previous case. The hairs were loose, and had mostly fallen out from these surfaces, and with the previous case in mind, I prescribed a parasiticide lotion, and brought away a number of hairs for microscopic examination, which, however, only yielded negative results. The whole scalp was so tender that the patient was unable to lay her head in any position for sleep, which she obtained only by considerable doses of anodynes.

June 18th. — Patient no better. Swelling or œdema extends to forehead and face, nearly closing the eyes. The diseased patches were covered with crusts and matted hair. The eruption had become so universal that it seemed best to cut the hair short. Ordered to have the head saturated with almond oil over night, and thoroughly washed out in the morning with soap and water, which was repeated several nights ; during the day the scalp to be frequently wet with blackwash.

Internally she was ordered a desert-spoonful of elixir calasaya, iron and bismuth 3 times a day, and effervescing salines.

June 22d.—Less swelling about face and scalp, but soreness largely remains. The larger patches appear somewhat better.

Ordered an ointment of calomel 4 grams, vaseline 32 grams, to be applied twice a day. Internally, ammonia, ferri citrat. and strychnia.

June 28.—Patient has a good appetite and sleeps well, but some new patches of pustules have appeared and the older ones are most inclined to heal satisfactorily.

Ordered ol. oliv., Goulard's ext. āā grams 32, tr. arnica grams 16. To be applied twice a day.

Internally,

Acid arsenoisi		
Strychnia sulph.....āā		06
Tr. ferri		
Acid hydrochloric dil.....āā	16	
Cinchonidæ sulph	2	
Elixir simpl., ad	128	

Dose a teaspoonful after meals in a wine glass of water.

July 1st.—Patient presented herself at office nearly cured. Said the local application stopped the discharge almost immediately, and with it the pain itching and soreness ceased.

July 10.—Patient well, hair returning on diseased patches, and no new pustules have appeared. I have reported this case simply on account of the liability there is of confounding it with kerion, herpes and favus.

WM. H. FITCH.

ROCKFORD, Ill.

NOTES FROM HOSPITAL PRACTICE.

ARTICLE X.

MERCY HOSPITAL SURGICAL REPORT. IN THE SERVICE OF PROF. EDMUND ANDREWS. REPORTED BY E. C. HELM, M.D., House Surgeon.

Recurrent Tumor of the Knee.

Miss B. G., aged 22, entered the hospital Sept. 13, 1878, with a swelling just below the knee, the leg at that point being one-third larger than normal. The tumor was soft, semi-fluctuating, and without any well defined border.

Severe pains radiated from this region upward to the thigh, and downward to the foot, being especially severe at night.

Sept. 16th.—Gave ether and punctured the swelling with an aspirating needle, but obtained no pus. Then a free incision was made, and the tumor found to consist of small nodules. These nodules were formed of fat and white fibrous tissue—the latter predominating.

There being no well defined border to the tumor, it was not enucleated, but the wound was dressed with simple cerate.

Sept. 24.—The wound having rapidly healed, and there having been no return of the pain, she went home to-day.

Feb. 28th, 1879.—She returned to-day with the tumors rather larger than when she first entered, and the pain is now excessive.

Directed, quin. sulph., potas. iod. internally, an anodyne liniment externally.

March 11th.—The pain continuing, ether was given and a transverse incision one decimeter in length made just below the knee and the tumor removed. The cutaneous branches of the internal saphenous nerve were found to have been involved in the hypertrophied connective tissue. The wound was then dressed, using carbolized zinc wash and carbolized oil covering.

March 20.—Patient went home to-day ; the incision has nearly united, and there is no pain.

Sept. 3d, 1879.—The patient has sent word that she has entirely recovered.

Recurrent Frontal Abscess.

E. B. S., aged 42, entered the hospital April 22, 1879, with the following history :

For the past sixteen years he has had paroxysms of intense neuralgic headache, occurring at quite regular intervals of from three to four weeks. The headache was usually attended with flexion of the hands and fingers, and of the toes as well. There was a sensation as if the extensor muscles were "asleep." The same sensation was felt in the muscles of mastication, accompanied with slight rigidity of the jaws. These deranged sensations and motions disappeared with the headache, only to recur with the next paroxysm.

Six years ago he was struck in the forehead, just above the bridge of the nose by the thumb-piece of the hammer of a gun, the thumb-piece reaching the bone. The resulting wound healed by first intention. Nothing new occurred for eighteen months, the periodical headaches continuing as before.

After the lapse of eighteen months, at the time the headache should occur, he noticed that the pain became localized, being upon the right side of the forehead, just above the external angular process of the orbit. The pain was accompanied by swelling, but no fluctuation. The pain soon became intense, of a throbbing character, and accompanied by considerable fever. The swelling gradually extended forward until the seat of the old wound, already alluded to, was reached, when it (the swelling) became softer and more fluctuating. The course of the affection would now vary, about every second time the swelling would subside, the pain and fever diminish, and the patient would be relieved, no noticable discharge having passed through the nose.

In the intermediate paroxysms, the swelling opens spontaneously, at the old wound, evacuates its contents, consisting mainly of pus, remains open a few days, discharging slightly, and then closes up. The patient would be free from pain for the next three weeks.

These paroxysms usually lasted about one week.

April 25th, 1879.—Ether was administered, the cicatrix excised, and a canal found leading down to the frontal sinus. This sinus contained a few drops of thick yellow pus.

A bent probe could be passed into the nasal fossa by the use of some force and the exercise of considerable patience. No dead bone could be found. After cleansing the wound, fluid was injected into the nose, and it (the wound) was dressed openly.

May 17th.—Fluid has been injected into the nose through the wound daily to ensure the passage remaining open.

Prof. Andrews to-day, after repeated, careful efforts succeeded in finding a small scale of dead bone about one centimeter in diameter, at or near the seat of the lachrymal bone. The bone could be felt only by pressing a sharply bent probe into the nose through the wound.

The patient now became anxious to return home, and as the bone could not be removed without injuring his features, he was advised to go home, and to inject a solution of

Acid. carbol		1
Acid. muriat. dil	1	
Sodii chlor.	1	2
Aquæ	50	

morning and evening, with the view of dissolving the bone.

The quantity of dilute hydrochloric acid was to be slowly increased until doubled, and the injection was to be used as long as there was any discharge.

May 19th.—The patient went home to-day.

Aug. 10th.—Letters received at intervals state that the patient is slowly improving, having had no return of his old enemy, the sick-headache.

Sept. 2.—Another letter just received states that he considers himself about well, that the external opening has closed, and there has been no return of the paroxysms of headache.

As to whether the opening into the nose from the frontal sinus remained patulous or not, he is unable to state, but thinks it is open, as there is no re-accumulation of fluid in the frontal sinus.

Malignant Sarcoma.

J. S. S., aged 48, came to the hospital for an operation Oct. 7th, 1878.

He had a tumor, .07 by .05, beneath the sterno-cleido mastoid muscle, which is not tender on pressure, nor has he had any shooting pains.

There are about a dozen small tumors surrounding the larger one, which are evidently enlarged lymphatic glands.

Ether was administered, and the tumors removed. The large tumor was in the inferior carotid triangle, and was also partly under the sterno-cleido-mastoidius.

Oct. 10th.—Tumor examined microscopically by Prof. Andrews. It showed a round-celled sarcoma, there being only a few scattered fibers, and nothing like a stroma being seen.

The mass was almost a continuous area of round cells. It had a capsule, from which it could easily be peeled, and had a gray appearance. The smaller tumors presented the same characteristics.

Oct. 11th, the patient has gone home, and his family physician advised to put him upon a course of arsenic treatment.

May 19th.—Patient has again returned for operation, the tumor having returned.

It is as large as a hen's egg, and is posterior to the seat of the original tumor, being entirely posterior to the sterno-cleido-mastoideus, the anterior line of the tumor being limited by the cicatrix formed by the first operation.

Ether was given and the tumor removed.

The patient remained a few days in the city, during which the wound was dressed, and went home May 24th.

July 21st.—Returned to-day with a tumor in the seat occupied by the first tumor. The present one is about the size of a walnut. Ether was given and the main tumor removed. Many small tumors were found in close relation with the external and common carotids.

These small tumors extended down into the thorax, surrounding the subclavian artery, so that it was impossible to remove them all. Those that could be reached were carefully dissected from their connection with the carotids. It was found necessary to ligate the external jugular vein, the ascending cervical and transversus colli arteries, and various smaller arteries. The wound was then dressed. In half an hour the hæmorrhage returned and was excessive, the man losing over a litre of blood in less than two minutes.

Firm pressure was then made, which partially controlled it. The dressings and sutures were then removed, and the wound opened. The impression had been that the ligature from the external jugular had slipped, but that was found to be in place, as were the other ligatures. Nothing but a general oozing could be found. The source of the hæmorrhage was therefore supposed to be the oozing which did not find an outlet until it had forced one by its collection and pressure.

The wound was re-closed, but in an hour had to be re-opened, as the oozing was increasing. After being exposed to the air for half an hour it was again closed, after which there was no more hæmorrhage.

July 23. Doing well. Went home to-day.

Sept. 1. Letters received state the tumors are returning, but he was advised not to undergo another operation as they have already extended into the thorax beyond the surgeon's reach.

Fungus Hœmatodes and Melanotic Carcinoma.

C. F. K., entered the hospital, May 31st, 1879, with history as follows:

About two years ago he noticed a wart on the outside of the right arm, near the shoulder which soon began to grow.

It was then bitten off by a horse, but soon returned. It then began to grow rapidly and to assume the form and color of a fungus hæmatodes, being globular in form, and as large as a good sized hickory-nut. It has a rather large pedicle, and bleeds easily. He now began bandaging it tightly, so that when he entered the hospital it was shaped like a mushroom. There is also a multiple tumor in the right axilla as large as an orange.

On the back of the left arm, just above the elbow there is a small subcutaneous tumor, and in the substance of the gluteus maximus muscle of the left side is another tumor about the size of a walnut.

June 2.—Ether was administered and the four tumors removed.

The one upon the right arm, as before, mentioned, was a well marked fungus hæmatodes. The one in the right axilla involved the right axillary glands, and in fact seemed to be composed mainly of them. It was of a dense, firm character, and of a whitish color, rather pearly.

Both tumors on the left side were very dark, almost black, good examples of melanotic tumors.

The tumors were subsequently examined with the microscope and found to be carcinomatous.

June 10th.—All the wounds have united by first intention except the one under the arm, which is slowly granulating.

June 11th.—Had several chills this forenoon.

At 3:30 p. m. the temperature was 39.7, while the pulse was but slightly accelerated.

There was no appearance of eyrsipelas, still it was deemed best to give full dose of cinchonidia and tr. iron.

June 12th.—There is a slight diffused redness around the axillary wound.

The temperature ranges from 39 to 40.6, with the pulse still below 100. Directed a wash of

Acid. carbol.	1	
Zinc chlorid.		3
Aquæ..	50	

to be kept constantly applied.

June 13th.—The erysipelas is slowly spreading. The fever has subsided. Applied a solution of nitrate of silver,

Argt. nit.	2
Aquæ..	50

by means of a camel's hair brush around the border of the erysypelas, but it did not check it.

June 16th.—The erysipelas, which is purely cutaneous, now involves one-half of the trunk.

June 20.—Erysipelas has disappeared.

June 25.—Patient left contrary to advice. The wound is slowly granulating.

Aug. 29th.—A letter from the patient states that the cut under the arm has nearly healed, having been delayed by sickness (the sickness being purely medical and not surgical) but now he is almost entirely well with no signs of any more tumors.

Excision of Shoulder Joint for Necrosis.

S. R., aged 33, entered the hospital May 27th, 1879, with the following history:

While in the army (during the civil war) he was struck in the left shoulder by a fragment of a spent shell, which inflicted but a slight bruise. However, the injury was followed by a slight fever, lasting but a few days, after which he apparently recovered entirely.

He had no more trouble with the shoulder until November, 1878, then, while carrying his arms full of stove-wood, his left arm suddenly and completely lost its power.

The shoulder soon became somewhat swollen and very painful, the pain becoming agonizing and not controlled by excessive doses of morphia. The family physician made an incision at the apex of the shoulder, and a very small amount of pus escaped. Another opening was spontaneously made over the spine of the scapula near its center.

There was, when entering the hospital, an entire absence of sensation over the spine of the scapula, and for a distance of five centimeters on each side, while over the apex of the shoulder there was moderate tenderness. A probe could be passed from one to the other of these two openings. The discharge was exceedingly slight, and semi-purulent in character. No dead bone could be found, though in the posterior fistula the probe grated upon fine sand-like particles which seemed to be imbedded in the substance of the muscles lining the fistula. The patient could not afford to lose much time, so before an accurate diagnosis was reached, ether was given, and an exploratory incision made from the tip of the acromion process through the deltoid nearly to its insertion. The head of the humerus being found honeycombed, was removed at the surgical neck by means of the chain saw. The tip of the acromion process was removed. The incision was then carried backward along the spine of the scapula for one-half its length, and a small triangular incision was made at the inner end of the scapular spine.

Through these incisions the spine of the scapula could be felt and was found to be soft and friable, and it was easily gouged out, indeed, a large part could be removed by the finger nail. This would thus seem to be one of those rare cases of necrosis of the shoulder in which the disease *originated* in the spine of the scapula.

Drainage tubes were put in, and the long incision was brought in apposition by sutures, over which broad and long adhesive straps were applied. The hæmorrhage was slight. Directed cinchonid. .015 and tr. ferri chlorid. .4 four times a day.

July 6th.—There has been considerable oozing, in fact so much that although dressed twice a day, the dressings have been thoroughly saturated. The pulse has ranged from 100 to 116, and the temperature from 37.8 to 39.2, being rather higher in the evening than in the morning.

July 8th.—Oozing has ceased; pulse and temperature but little above normal.

July 9th.—Has been up several hours; eats and sleeps well; temperature and pulse about normal. Drainage tubes removed. Wound closing rapidly with little discharge.

July 11th.—Has slight fever and is rather restless.

July 12th.—Fever increasing slowly; he does not sleep well; no appetite, and is very restless; still granulation is going on rapidly.

July 13th, 8 a. m.—Pulse, 100; temperature, 39.2.

Directed

Acidi salicylici	15
Sodii bicarb	10
Tr. opii camph	
Aquæ *āā*	40

and directed him to take 4 gms. every three hours — day and night — alternating with cinchonid. .03 and tr. ferri cl. .4.

In spite of this treatment the fever continued to rise. Below will be given the range for two days.

July 13—1 p. m.—Pulse, 108; temperature, 40.4; 3 p. m. Pulse, 108; temperature, 40.4; 5 p. m.—Pulse, 110; temperature, 40.5; 7:30 p. m.—106; temperature, 40.3; 9 p. m.—Pulse, 100; temperature, 40.

July 14th—7:30 a. m.—Pulse, 106; temperature, 40; 11 a. m.—Pulse, 110; temperature, 40.4; 1 p. m.—Pulse, 110; temperature, 40.5; 3.30 p. m.—Pulse, 116; temperature, 40.7; 5.30 p. m.—Pulse, 108; temperature, 40.4; 9 p. m.—Pulse, 100; temperature, 38.3.

Dropped the tr. of iron as he was becoming nauseated, and gave dilute hydrochloric acid in full doses; also pushed the cinchonidia and salicylic acid.

July 15.—The pulse and temperature have ranged as on yesterday, but have been a shade higher. Notwithstanding the continuous high temperature the wound looks well; granulation is good, and there is no trace of erysipelas; was slightly delirious last night.

July 16.—The temperature ranged from 40. to 40.6 all night. Directed the night and morning doses of cinchonidia sulph. to be replaced by quin. sulph. There is this evening a faint erysipelatous redness around the wound. Directed the carbolized zinc wash to be kept constantly applied, and increased the dose of hydrochloric acid.

July 17th.—The redness has spread down the arm. Painted a belt, .06 in width, around the reddened space, of a solution of nitrate of silver,

Argt. nit	2
Aquæ	50

which appeared to limit its spread on the body, but had no effect on the arm, as the erysipelas spread to the elbow.

Notwithstanding his erysipelas, his appetite has increased, he having eaten almost nothing for the past week until to-night when he ate quite heartily.

July 18—20th.—About the same.

July 21st.—Erysipelas fading; sleeps well; appetite good.

July 26th.—Walks around the ward and feels quite well. The wound is closed except at the points where the drainage tubes had been inserted.

July 27th.—Went home to-day.

Sep. 2d.—A letter just received states that the wound rapidly closed up after leaving the hospital, but that the arm, while being of considerable use, is far from being strong.

Medical Report. Service of Drs. N. S. and F. H. Davis.

Reported by H. M. Starkey, m. d., House Physician.

Case 1.—J. S., German, age 40, bachelor, peddler. Entered hospital April 19, 1879.

The only history obtainable from friends is as follows: Patient has always been very healthy, and retired last night apparently in perfect health. Was found in bed at half past six this morning, breathing heavily and frothing from the mouth. Within a few minutes he had a slight convulsive seizure, which stiffened most of the muscles without producing decided spasm. Was taken to the hospital two blocks distant, and first seen by the house doctor about half past seven a.m.

As brought in, his condition was so alarming that it was thought by the attendant that he would not live till he could be placed in bed. When first seen by house physician, patient was lying unconscious upon his back. forehead and nose rather pale, while lips and lower part of face were livid, and lips were covered with foam. There was now apparently neither paralysis nor spasm of any part. Breathing slow, fifteen per minute, labored and stertorous, and lungs seemed almost full of mucus, as coarse râles could be easily heard from all parts of the lungs. Pulse full and slow, and heart beating very laboriously. All vessels quite full, those of the head not particularly so. Pupils a little contracted, yet respond sluggishly to the light.

In a few moments, and during the examination, a severe attack of dyspnœa supervened, lasting about a minute. During this attack patient was in extreme distress, gasping for breath, writhing and struggling to get out of bed. Face became purple, and ears and lips almost black. Finally, when it seemed as if he could no longer live, his breath came freely, and he was at once relieved. During this spasm the pulse rose to 130, but fell to about 100 after the paroxysm passed. Cold was applied to the head and sinapisms to the calves of the legs. He remained comfortable about three minutes, when the paroxysm returned with all the phenomena before described. There was a little vomiting about this time, the vomited matter being thin and yellowish. Also unconscious discharges of urine and fæces. The attacks of dyspnœa continued to occur every three to five minutes for about an hour, gradually decreasing in severity. About half past nine patient passed into a comparatively quiet sleep, which lasted an hour or more, when he suddenly awoke in the wildest delirium. So violent was the delirium that it was found necessary at once to confine his hands, and even then it required two nurses to use their utmost strength to restrain him in bed. He struggled tremendously and yelled and screamed uproariously. Chloroform was administered to the anæsthetic degree, but this quieted him only so long as the anæsthetic influence was exerted, and within two minutes after the administration was discontinued, he was as uncontrolable as before. The anæsthesia was repeated several times, but with the same result.

As nothing could be given by the mouth, chloral hydrate ʒss. and potass. bromide gr. xx was administered every half hour in enema. This producing no appreciable effect, in two hours the same medicines, with the addition of ext. veratriæ fl. gtt. j, was given every half hour by the stomach.

The patient being anæsthetized, and a tube passed back of the glottis and from seven to ten centimeters into the œsophagus, the medicine held in milk or beef broth was injected with a syringe through this tube. This was continued till five o'clock p.m., and a number of administrations were made at irregular intervals after that time, and before nine o'clock, but although all were retained, they seemed not to have the slightest effect. In every instance the patient became wild as before almost immediately after the chloroform was withdrawn, and remained in this condition till he was again anæsthetized. In several instances he was kept under the influence of the anæsthetic for twenty or thirty minutes, thinking this, with the aid of the chloral, might so far quiet as to allow sleep, but no permanent effect was produced. Not only would the patient not sleep himself, but he baffled all attempts at sleep on the part of other patients, and his yells could be heard over a block away.

Other means having failed, at ten p. m. the right temporal artery was opened, and about 640 C. C. of blood withdrawn. Patient became more quiet before the blood ceased flowing, and within half an hour the pulse, which had been from 120 to 130, fell to 88, and patient became quiet and rational enough to nod his head when asked if he was thirsty, and to open his mouth when water was offered. He swallowed without difficulty, and shook his head when asked if his head ached. At this time he kept moving his head rapidly from side to side, but within another half-hour passed into a calm and quiet sleep. He slept most of the time till morning, awaking about every half-hour; he tossed restlessly for a few seconds, and then again went to sleep. His pulse remained between 85 and 95.

April 20. — Slept quietly most of the day, awaking occasionally and talking coherently, yet seeming a little dazed and confused withal.

Was given fluid extract of ergot and tincture of physostignas āā grams 2 every four hours. Pulse remains quiet and about eighty beats per minute.

April 21. — Continues to improve. Talks naturally about himself and his business, and gave directions for the custody of property. Close observation shows a slight degree of paresis of the right side of the body and of the right extremities and of the left side of the face. The tongue, when protruded, points a little to the left of the median line. The right hand has not so powerful a grip as its fellow, although the man is right-handed; and neither the tactile sense nor the sense of tickling is as acute on the right as on the left side.

April 22. — Felt so well that he was allowed to rise and dress and to walk about the ward. He concluded to go out and see about his business, and accordingly went down town and was gone nearly all day. Returned at evening without having suffered inconvenience from his prolonged exertion.

April 23. — Sat up all day and walked about the ward and yard much of the time. Complains of a dull, heavy feeling of fullness about the head.

April 24. — Was out of the hospital most of the day, and seems nearly well in every respect, but says he will not be well till he has been bled *more thoroughly;* that if we would now take away twice as much blood as was before withdrawn, he would be all right. As he bears the marks of numerous previous cuppings and bleedings, and says he has been in the habit of being bled every few months, it is probable that further abstraction of blood might prove serviceable.

April 25. — Still improving, but complains of a sense of fullness and oppression, particularly about the head. Bled from left arm 320 to 380 C.C., after which he felt much better.

April 27. — Left hospital apparently well.

Remarks. — This was, doubtless, a case of severe capillary congestion of the brain, with cerebral hyperæsthesia. The prompt and complete relief obtained by *blood-letting* illustrates the great value of that *unfashionable* remedy in a certain class of cases.

Case II.—Acute Suppression of Urine, with Hiccough.

E. O. Irish, aged 40, expressman, entered the hospital April 18, 1879.

History. — History, which was not obtained till three days later is as follows: Two weeks ago patient was riding upon wagon, perspiring freely and feeling well. Wind changed suddenly, and blew cold from the lake. Felt chilled, and an immediate and uncontrollable desire to urinate, but upon trial it was found impossible to do so. Has since passed very little water, and about a week after the chill was seized with hiccough, which has continued almost incessantly, giving no rest day or night since.

Present Condition. — Seems very much exhausted from lack of rest and continuous wearing of the hiccough. Temperature nearly normal, 37.4° C.; pulse 100, and moderately strong. Skin rather dry and harsh. Thirst is intense, and he has some appetite, which it is impossible to gratify, as every attempt at swallowing increases the spasmodic action to such an extent that vomiting is produced.

Administered ten grains each of chloral hydrate and gum camphor, which gave relief in a few minutes, and allowed restful sleep for two hours, when the hiccough returned. By repeating the dose a number of times, a comparatively comfortable night was obtained.

March 19 and 20. Hiccough continues with short intermissions. Chloral and camphor give but temporary relief, under largely increasing doses. Tried, without effect, heat to the epigastrium, the elastic bandage applied about the chest and abdomen, and various drugs. Patient is eating a little while under the effect of the chloral mixture, but a few swallows is sufficient to cause return of the spasmodic action.

March 21. Urine, which is rather scanty, is not found to contain albumen or other abnormal constituent, but the normal ingredients are all much reduced, and the specific gravity is but 1006. Ordered a warm bath at evening. Fl. ext. jaborandi m. 20, every four hours, alternating with a teaspoonful of the following mixture every four hours:

	Grams.
℞ Potass. brom…	
" acetatis āā…	16
Vini colchici rad…	16
Syrupi et aquæ āā q. s. ad…	128

M.

March 22. Very profuse perspiration. Four hours comfortable sleep in early part of night. Much distress since, hiccough being quite continuous. Secretion of urine increasing a little.

March 23. Sweating still copious, and secretion of urine is *very* free, as much as three pints being collected in twelve hours. Specific gravity of urine 1009, and it contains neither albumen nor sugar.

Notwithstanding re-establishment of the secretions, hiccough continues almost incessantly, and patient, taking little nourishment, is becoming more exhausted. This continued, with little modification effected by treatment, until April 5, when patient died of exhaustion.

Autopsy not allowed.

Constitution and Properties of Dialysed Iron. (M. Personne, *Acad. de Méd.*, Aug. 5-10-19, 1879. *Lyon Médical*, Sept. 1879, p. 19.)

The ferruginous liquor known as dialysed iron is not a veritable aqueous solution of sesquioxide of iron; it is only a pseudo-solution of sesquioxide of iron modified, differing from the ordinary oxide in that it is insoluable in acids, and has less specific heat. It was discovered more than twenty-five years ago by M. Péan de Saint-Gilles, and since Graham has proved that this modified sesquioxide of iron is a colloid body, that is to say not capable of forming a true solution. Its apparent solution does not possess the property of traversing organic membranes. It is insoluable in the gastric juice, and even in the most energetic acids, it cannot be absorbed, and in consequence is completely inactive.

M. Berthelot had nothing to add to what M. Personne had said, except that if he had to choose a preparation which had no effect on the economy, he would take dialysed iron.

Society Reports.

ARTICLE XI.

TRANSACTIONS OF THE CHICAGO GYNÆCOLOGICAL SOCIETY. NINTH MEETING, SEPTEMBER 26TH, 1879. W. H. BYFORD, M.D., in the chair.

DR. MERRIMAN read a paper on Perimetric Inflammations (published in the present number of the JOURNAL AND EXAMINER.)

DISCUSSION.

DR. NELSON:—I would call attention to the importance of a correct diagnosis, for if the attention of the physician is directed simply to the metritis or endometritis, and a treatment adopted which would be appropriate were these the only diseases present, *with no perimetritis*, the patient is likely to be made worse, rather than better, should perimetritis also, in a chronic form, be present; as the applications will then be too strong. We should always first ascertain the mobility of the uterus before making any application. If its movements are restricted in any direction, it is usually from the effects of perimetritis; and if perimetritis has produced this sluggish mobility of the uterus, it is almost certain that strong applications to the interior will arouse the inflammation, latent in a chronic form, and transform it into an acute inflammation with its attendant dangers. When perimetritis exists, any application is too strong which produces severe pain for an hour or more.

If such pain is not produced, carbolic acid, a solution of iodine, and even the full strength pure nitric acid may be applied to the os, at another time to the cervix, and finally to the whole uterine cavity with safety and advantage, provided the proper care be exercised as to the nearness of menstruation. But if much lasting pain is produced, even the introduction of the sound may be a dangerous operation, and much more so any application to the interior of the uterus.

I had the opportunity to-day of examining a pregnant uterus in a patient having varicose veins of the left limb. extending even to the vulva. I was much interested to find the left side of the cervix, and so much of the uterus as could be examined, had the bluish appearance and the peculiar feel of a varix, while the right side was nearly or quite normal.

If we remember the difficulty with which ulcers, resulting from slight abrasions, heal upon the leg, when the veins are in a varicose condition, I think we shall in part understand why inflammation around the uterus is so likely to become chronic and then so difficult to completely remove. The normal genital veins have many points of resemblance to a varix.

In seeking for the causes of perimetritis, I would emphasize traumatism—the injury of the tissues about the uterus by violence, by downward pressure, as in falls, lifting and the like; and by upward pressure, as in proper coitus, especially where there is a great disproportion between the male and female organs, particularly if there be added the disturbance of the nervous system in a "cold." Hence, we find in hospitals that prostitutes are frequently sufferers from perimetritis, both acute and chronic.

Finally, a caution in the use of hot water, which is a valuable therapeutic agent in both the acute and chronic forms of perimetritis, if properly used.

In the acute form, the interrupted, forcible stream should rarely be used, and never if it produces continuing pain; while in the chronic form, the intermediate stream is perhaps preferable, but the force should not be sufficient to produce lasting pain.

In answer to a question, Dr. Nelson said he thought in those cases where injury was inflicted during coitus, it was due to the stretching of the ligaments and attachments of the uterus by the disproportionate male organ.

DR. MILLER said the subject introduced by Dr. Merriman for this evening's conversation was one of great interest. Perimetritis was a disease of frequent occurrence. The consequences liable to follow it were many times serious, and not infrequently disastrous. The varied terms used to designate this inflammation was evidence of an attempt at over-refinement by writers. He doubted whether inflammation, especially if acute, was limited to a single structure' within the female pelvis. Perimetritis is a term sufficiently definite for our present purpose.

The causes of perimetritis are exceedingly numerous. Mechanical injury is doubtless a common cause. How it is possible for the delicate tissues within the pelvis to escape, during parturition, may well excite our wonder. A hard body (the fœtal head) is forced through an unyielding canal (the pelvis) with such violence, that it would seem every tissue would be contused and lacerated beyond the possibility of recovery. To these contingencies and to others of a mechanical nature, we may add as frequent exciting causes, exposures to cold, especially during menstruation. These exposures occur in ways too numerous to mention. A vicious habit, which he believed to be very prevalent, and should be strongly condemned, was a resort to cold vaginal injections, immediately after coitus. If Noegerath's startling theory, of the baleful influence of latent gonorrhœa, be well founded, we should not be surprised that perimetritis is common, for it is easy to understand how specific inflammation may extend to the interior of the uterus, the Fallopian tubes, ovaries and surrounding tissues. Perimetritis sometimes unexpectedly follows, as an accident, slight operations within the pelvis.

It is not usually difficult to diagnose a case of perimetritis, and yet it is no uncommon circumstance, that symptoms due to perimetritis are for a long time treated as diseases, which in the given cases do not exist. Some of the most frequent errors arise where the inflammation involves tissues contagious to the origin of the sciatic nerve, leading the unwary to suppose that the remedies for sciatica are indicated; or the bladder or the rectum may become similarly involved.

The history of the case, the pulse, the temperature and a careful exploration of the pelvis, would usually obviate these errors.

He agreed in the main with the suggestions made regarding the treatment and would not repeat them. He would, however, add as an important measure, counter-irritation. A blister of large size applied over the hypogastrium, to be followed by fomentations for a few hours, then the following to be substituted :

℞	Ung. hydrarg.	16 grams.
	Pulv. camph.	4 "
	Pulv. opii	2 "

M.

The hot injections to be followed by carbolized cotton saturated with glycerine, to which a solution of opium should be added.

Should suppuration take place, and fluctuation be distinct, an opening into the abscess would be judicious.

Dr. Roler thought it unfortunate that so many confusing terms were employed to designate inflammations about the uterus. The distinctions between perimetritis, parametritis, etc., as expressed by some gynæcologists, cannot always be made, as it seldom happens that one set of tissues are singly affected.

Pelvic peritonitis generally involves more or less of the connective tissue beneath, and in cases where cellulitis with effusion becomes the important feature, the contiguous parts or organs are apt to be implicated either primarily or secondarily. In his opinion, acute perimetritis, as defined by the essayist, seldom occurs as a primary affection, but is an extension from an inflamed uterus or ovaries brought about by some aggravating circumstance.

The treatment of acute forms of pelvic inflammation should be decidedly antiphlogistic. Leeches, followed by hot fomentations over hypogastrium and sitz-baths, are the chief local measures. Opiates should be given freely. In the chronic forms, blistering, as recommended by Dr. Miller, and hot water injections in the vagina, were of greatest service.

Dr. Sawyer had also noticed the fact to which attention had been drawn by Dr. Nelson, that prostitutes were often subjects of perimetric inflammations, and had attempted to find an explanation of this frequency. He could not accept the view of that gentleman that it was due to violent stretching of the uterine attachments, for the latter are purposely and often very rudely stretched by the surgeon, during certain operations upon the organ, and yet inflammations of the surrounding parts almost never result as a consequence. Nor could the speaker fully accept the view advanced by others, that the male organ could so bruise the female parts as to excite perimetric inflammations. When it is recalled that these parts are subjected to severe contusion by the passage of a snugly fitting fœtal head during parturition, usually without this consequence; the speaker thought the bruising incident to a most violent coitus must be much less.

After giving some thought to this subject, Dr. Sawyer said, he believed the frequency of perimetric inflammations in abandoned women, and perhaps in some others also, found its explanation in the pernicious and disgusting habit of permitting coitus during or very near the period of menstruation. The effect of this obviously being to increase the natural hyperæmia to a dangerous degree.

He had also observed that some women after abortion seemed liable to perimetric inflammations, which, he was convinced, had the same explanation; unseasonable or immoderate coitus not only exciting the abortion, but inducing a degree of congestion which made the woman an easy victim to perimetric inflammations afterward.

DR. EARLE said that he would call the attention of the Society to simply one cause of perimetritis, namely, the use of those instruments and appliances for dilating or medicating the cervical canal:

1st. The use of slippery elm, sponge or laminaria tents; and

2d. The use of various metallic dilating instruments.

In supporting his proposition, he said that while in many cases great good had seemed to follow this line of treatment, many cases of dysmenorrhœa and sterility being relieved and cured, he thought that great care should be exercised in their use.

He related a case in practice where a very small slippery elm tent was introduced — the utmost care being used — but a very severe inflammation, followed by abscess, was the result.

A second, recent, case was also related. A lady, sterile for years, was being treated by the use of a series of metallic bougies. And although the introduction of these instruments had been made at intervals of several days, and the dilatation carried on very slowly, at last a slight perimetritis was produced.

DR. JONES alluded to the comparative anatomical position of the right and left utero-sacral ligaments as favoring the occurrence of inflammation on the left side of the pelvis, rather than the right. He thought the use of sponge tents prolific of cellulitis, and mentioned, as a frequent cause, the abstraction of heat from the soles of the feet by the cold iron of sewing-machine treadles, especially during menstruation.

As a matter of interest in prognosis, it was important to determine, if possible, whether inflammation pervaded mainly serous tissues or the areolar — the latter being far more prone to suppuration.

ARTICLE XII.

MICHIGAN STATE BOARD OF HEALTH.

The regular quarterly meeting of this board was held at its office in Lansing, on Tuesday, October 14, 1879, a full board being present. The board is as follows: Prof. R. C. Kedzie, president; H. O. Hitchcock, M.D.; Hon. Leroy Parker; D. C. Jacokes, D.D.; Henry F. Lyster, M.D.; John H. Kellogg, M.D., and Henry B. Baker, secretary.

Dr. Kedzie read a paper on the

"WASTE OF HUMAN LIFE,"

based principally on the recent Adrian and Jackson horrors. The paper stated in strong terms the necessity for some more efficient preventive measures, and by his request the subject was referred to the committee on legislation with instructions to report in regard to existing laws, the necessity for additional legislation, and, if necessary, incorporate a bill with its report.

LOCATION OF CEMETERIES.

Dr. Hitchcock presented the subject of the proposed location of a cemetery within the incorporated village of Richland. No formal action was taken, but the members seemed agreed that cemeteries should not be located in villages.

Dr. Baker presented the request of the recorder of Çaro, Tuscola county, that he visit and examine into the sanitary condition of the place and the cause of the spread of diphtheria. The board ordered the secretary to comply with the request, if the village authorities pay the expense of the trip, as the small appropriation made by the legislature to the board is exhausted.

The secretary reported several circulars relative to the duties of health officers, local boards of health, and others, which have been prepared, but not issued on account of lack of funds. He was authorized to publish them in the annual report for 1879, and, if possible, to have a large number of reprints printed for distribution to health officers and members of local boards of health.

ACUTE GLANDERS.

The secretary read a report of a fatal case of acute glanders, reported by S. P. Duffield, M.D. A young man residing in Wayne county purchased a horse in Detroit, afflicted with glanders. The young man took the disease from the animal and died a horrible death. The secretary read a report of a similar case, occurring in Troy, Oakland county, reported by Dr. J. A. Post. He also read an abstract of a paper on the subject of glanders, mentioning other cases which have been reported to the board. This paper embodied a description of the disease, the method by which it is communicated, suggestions for its prevention by means of a prompt report of cases, the isolation of animals or persons afflicted, the destruction of animals, disinfection of surroundings, the existing laws in this State, the laws in other States, and a proposed series of regulations to be adopted by local boards of health in Michigan.

A communication from Dr. O. Marshall, of Lansing, was read relative to diphtheria in the township of DeWitt, Clinton county. A map accompanied this paper, showing the number of cases and the deaths at each house, the order of the occurrence of cases, and the paper showed the methods by which the disease was communicated from one person to another. He was able to trace such communication in nearly every case.

ANNUAL REPORT OF SECRETARY.

In accordance with the by-laws of the board, the secretary presented his annual report of the property of the board, which included the additions to the library (now numbering 1,769 entries, instruments purchased, etc).

The amount of expenditures of the State board of health for the fiscal year ending Sept. 30, 1879, was reported as follows:

Chemical analyses		$ 10.00
Engraving, drawing, etc		180.00
Expenses of members	attending meetings	150.98
	other official	189.93
Instruments and books		173.62
Paper, stationery, etc		243.47
Postage	office	652.39
	members	15.28
Printing and binding		659.60
Secretary		2,000.00
Special investigations		41.40
Miscellaneous		93.39
Total		$4,410.06

NATIONAL HEALTH SERVICE.

A communication was received from the national board of health, asking the advice of the board as to the best plan for the organization of a national health service, and a plan prepared by Dr. Hitchcock by request of the board, was adopted, and the secretary directed to transmit it to the national board of health.

QUARTERLY REPORT.

The secretary read a report of the work of the office since the last meeting. During this time the correspondence with local boards of health, observers of diseases, and meteorological observers has been kept up, and nine new meteorological stations have been established. Over 500 pages in the letter-book have been used in copying correspondence, and a large number of communications have been received and passed over to appropriate committees. Fourteen hundred copies of the sixth annual report have been wrapped, directed and distributed to health officers and others. Correspondence relative to sanitary appliances has been had, and four articles have been added to the exhibit in the office of the board, namely, an Ely sewer stench-trap for use on street corners, manufactured by A. Ely, 110 West ave., Rochester, N. Y.; a Parmenter's air-moistener, and a furnace air-moistener, manufactured by I. W. Parmenter, 15 Murray St., N. Y. City; and a sample of a new disinfectant called Little's soluble phenyle, for sale by T. W. Lawford, 10 S. Holliday St., Baltimore, Md.

STEAMBOAT INSPECTION.

The secretary presented the subject of the necessity for steamboat inspection on the inland lakes of the State, and read correspondence from James A. Dumont, U. S. supervising inspector-general of steamboats. Mr. Dumont says that "any State having navigable waters is guilty of a crime against its citizens every day that it fails to enact laws for their protection when on steamers navigating such waters." This subject was referred to the Hon. Leroy Parker, committee on legislation, who was asked to consider the question of making the U. S. regulations for steamboats applicable to the inland waters of Michigan.

A report was made of the correspondence with the Grand Rapids board of health, relative to the office and salary of health officer in that city. Mr. Parker had prepared, at considerable labor, an opinion on the subject, which has been submitted to, and approved by, the attorney-general.

SANITARY PROTECTION.

Dr. J. H. Kellogg read a report on "sanitary protection associations in cities and villages." He presented strong arguments for a sanitary association in every city and village in the State, which shall coöperate with the local boards of health, wherever possible, and secure action when they are inefficient. He gave a detailed plan for the organization of such associations.

SANITARY CONVENTIONS.

Drs. Hitchcock and Lyster, of the special committee, reported details of plan for a sanitary convention on January 7, 8, next, at Detroit, and one at Grand Rapids during the month of February, 1880.

THE CONVENTION AT DETROIT

Will be held in St. Andrew's Hall, on the dates named above. There will be two sessions each day from 9 a. m. till 12 m., and from 2 p. m. till 5:30 p. m. The officers of this convention are as follows: President, Ex. Gov. Hon. H. P. BALDWIN; Vice-Presidents, Hon. JAMES BIRNEY, U. S. Minister to the Hague; WM. BRODIE, M.D., Hon. WM. L. WEBBER, Mrs. JOHN J. BAGLEY, and Mrs. MORSE STEWART; Local Secretary, C. HENRI LEONARD, M.D., 50 LaFayette Ave., W. Detroit, Mich.

SUBJECTS TO BE PRESENTED.

1. Abattoirs for cities.
2. School hygiene.
3. Ventilation of living and sleeping rooms.
4. Cooking schools.
5. Plumbing for dwellings.
6. Prevention and limitation of contagious diseases.
7. Inspection of food.
8. Water supply for the family.

CONVENTION AT GRAND RAPIDS.

The minor details of this convention are not perfected, but these and the date will be announced hereafter. The president of the convention will be Rt. Rev. Geo. D. Gillespie, and the local secretary will be Arthur Hazlewood, M.D.

SUBJECTS TO BE PRESENTED.

1. Public interest in, and importance of, general sanitation.
2. School architecture in respect to its hygienic as pectsand importance.
3. Sewerage—its importance, its benefits, and its dangers.—E. H. Van Deusen, M.D.
4. Sanitation of the sick-room.
5. Infection. The every-day dangers of it, and how to prevent it.
6. Habits in their relation to health and disease.

There will be an evening session from 7 till 9:30 o'clock at the opening of the convention; on the following morning a session from 10 a. m. till 12 m; a session from 2 p. m. till 5 p. m., and an evening session from 7 till 9:30.

EXHIBITION OF SANITARY APPARATUS.

Manufacturers of all kinds of sanitary apparatus or appliances are invited to send specimens of their manufactures for exhibition at these conventions in accordance with the following regulations:

(*a.*) The Board of Health reserves the right to decline any article not deemed suitable.

(*b.*) A full description of each article proposed to be exhibited must be forwarded to the Secretary of the convention with the application for space.

(*c.*) There will be no charge to exhibitors for entrance fee or for wall or floor space.

(*d.*) Exhibitors will pay all expenses of transportation, storage, placing and removal of goods, and must themselves be responsible for any breakage or damage to their articles.

(*e.*) Every article exhibited, and every model, drawing or photograph must bear a descriptive label giving a detailed statement respecting its construction, use and the price at which it can be furnished, and the name and address of the agent and place of sale.

(*f.*) Exhibitors may employ persons to explain their exhibits, and properly to solicit orders.

(*g.*) The position of articles in the hall will be determined by the Secretary of the convention.

(*h.*) Articles for exhibit will be received by the Secretary of the convention at Detroit, Dr. C. H. Leonard, 50 La Fayette avenue, west, from December 15, 1879, to Jan. 6, 1880. The time of entering articles at Grand Rapids has not been determined.

JUDGES, AWARDS, ETC.

Competent judges will be invited to thoroughly examine the articles exhibited and certificates of merit will be awarded. The records of the proceedings, papers and addresses, and a catalogue of articles exhibited with award of the judges will probably be published in the annual report of the Secretary of the State Board of Health. Reprints from that of the proceedings may contain several pages of advertisements for which there shall be charged the following rates, $10 per page, or $6 per half page, the payment of which secures the advertiser ten copies of the reprint, and additional copies at cost.

The admission to the exhibit and to all sessions of these conventions shall be free.

A PLAN FOR EXAMINATIONS.

Dr. Lyster, special committee on proposed examinations by this board in sanitary science, reported a plan. Dr. Baker proposed some slight modifications, and the plan was adopted. It contemplates the examination and granting of certificates to such persons as sustain an examination showing them qualified to act as health officers. The first examination will be held in July next.

DISEASES AND SLAUGHTER-HOUSES.

Dr. Hitchcock presented a voluminous report on epidemic, endemic and contagious diseases, mainly relating to the subject of diphtheria; also, a report on slaughter-houses, rendering establishments, etc. In this paper he recommended and proved the economy of confining this business to one establishment in each city and village.

"DROWNED" LANDS.

Dr. Lyster presented an exhaustive paper on the reclamation of "drowned" lands, showing their great influence on public health. In this paper he includes a translation of a paper relating to the influence on health of "drowned" lands and their reclamation in a district in France, the facts covering a period of 20 years.

VENTILATION.

Dr. Jacokes presented a paper on "warming and ventilating private dwellings and public buildings already constructed."

His paper contains diagrams illustrating the methods recommended.

After the transaction of a large amount of business, the board adjourned. The next regular meeting of the board will be on Tuesday, January 13, 1880.

GRATIFYING PROGRESS.—The first medical school adopting the full graded system of medical instruction in this country was the Chicago Medical College, organized in this city in 1859. For twelve years it stood alone. In 1871, the medical school of Harvard adopted the same system. The medical department of the new Syracuse University, in Syracuse, N. Y., followed about the same time. Within the last two years the University of Pennsylvania, the medical department of the University of Michigan, the medical department of the Iowa University, and the medical department of Yale have entered upon the same course. And now we have an official announcement that after the close of the present college term the Bellevue Hospital Medical College, in New York, and the Detroit Medical College, Mich., will adopt the full three years, graded system ; and the authority of the St. Louis *Clinical Record*, that the St. Louis Medical College has also adopted the same course. Truly the cause of progress is onward, and with such increasing force as to make the long-desired revolution in medical teaching complete in a very brief period of time. D.

TRI-STATE MEDICAL SOCIETY, OF INDIANA, ILLINOIS AND KENTUCKY.—The fifth annual meeting of this society will commence on the morning of Tuesday, November 4th, in Evans Hall, Evansville, Indiana, and is expected to continue four days. The programme contains many interesting topics, and the president, Dr. J. A. Ireland, of Kentucky, is to deliver a public address on the evening of the first day of the meeting. Many of the railroads connecting with Evansville, will carry members of the society at reduced rates.

Domestic Correspondence.

ARTICLE XIII.

BOSTON LETTER.

MESSRS. EDITORS:—If we include dispensaries with hospitals, Montesquieu's remark, "Malheur au pays qui a beaucoup d'hôpitaux," will apply as strictly to Boston as to any other American city. For charitable medicine is in strong force here. Good coats and bonnets, with feathers in them, encouraged by the liberality with which advice and medicines are dispensed, ask for gratuitous treatment here as frequently as do similar frauds in other cities. But do not for a moment imagine that the growth of this evil has escaped watchful eyes. Benjamin Franklin once said: "In my youth I traveled much, and observed, in different countries, that the more public provisions were made for the poor, the less they provided for themselves." The principle which underlies this observation has become so strongly ingrained in the minds of those who control the charities of Boston, that an unceasing effort is made to cultivate more pride and a feeling of greater independence in the minds of those who apply for aid. In our dispensaries watchfulness is exercised lest gratuitous advice and medicines be given to individuals who are able to pay for them. To suspected patients, opportunity is given to pay a fee, no matter how small in amount. The practice is a wise one, and in the process of time must effect a healthful influence. But it is amazing, particularly when money is scarce, to see how easily individuals quite above the ordinary dispensary patient, can pocket their pride—if indeed they possess such a commodity—and calmly apply for aid for which they are perfectly well able to pay a moderate fee. Unless they be met with a wise firmness, it is hardly necessary to say that not only does their manhood or womanhood become seriously injured, but the city becomes unfairly and increasingly burdened. With some exceptions, which, however constant, should be but few, charity of every sort ought to be so dispensed that while the objects of it receive aid, they at the same time should not be allowed to feel that they can freely secure something for nothing. Indeed, in the old Boston dispensary, to a brief history of which the foregoing remarks are preliminary, an official has been appointed whose business it is to separate the sheep from the goats.

" In order that the funds needed for the worthy poor may not be applied to relieve persons who have sufficient means to purchase their own medicines," says the dispensary report for 1878–79, "it has been found necessary to discriminate carefully between the patients asking for assistance. The managers have accordingly chosen an officer who assists the superintendent by inquiring into the condition of the applicants.

" After careful investigation, he notified certain persons that they were able to pay for their own medical attendance, and others that this was a Boston institution, not chartered for the residents of other towns in this or adjoining States."

This brave old dispensary, the only one we have which is not an out-patient department of some one of the hospitals, ranks number four in the list of all existing charities of a similar nature, the first having been established in London in 1770, under the auspices of Dr. Hulme; the second in Philadelphia in 1786 (and which, by-the-bye, is run to-day just as it was nearly one hundred years ago, much to the loss of students of medicine); the third in New York in 1786, about which I know nothing; the fourth, our own, in 1796.

For many years patients were obliged to bring a contributor's letter couched in the following terms:

" *To the Physicians of the Boston Dispensary:* I recommend ———————— to the care of the Dispensary, believing —— to be a proper object of this charity. ———, *Contributor.*"

And the patient, after recovery, received a ticket of discharge.

These formalities were discontinued in the year 1856, since which time patients have applied and been treated without introduction.

In 1852 the dispensary was empowered to supply food, fuel, clothing, "or any other kind of relief," in addition to medical assistance, to suffering applicants. In this respect the institution, however, is peculiar, and its charities, therefore, are much broader than those of the ordinary and purely medical dispensary. The house occupied by this charity is a plain, two story and square brick building, of Spartan simplicity within and without. It stands in a quiet by-street, and in view of the amount of relief given within its walls, would seem too contracted.

In some cities, notably Philadelphia, dispensaries have a resident physician who is supposed to be such an Admirable Crichton of medical science that he, single-handed, can cope with every ill which may present itself among the thousands of yearly applicants for relief. In the management of the Boston Dispensary there is more modesty if not less wisdom. As the patients apply, their ails are sifted, so that the child goes to one department, a skin case to another, an eye disease to a third, surgical cases to a fourth, women's diseases to a fifth, and so on. That is, the treatment is split up into specialties, as it ought to be, and at the head of each department is a competent and well-tried physician or surgeon. For, in Boston, it is considered an *honor* to be a dispensary medical official. And not only are the attending physicians and surgeons men of experience and men of name, but the district physicians are young men who rank high in their classes, and who are as anxious to secure the position as they are in later years to obtain State appointments in hospitals. So that with us dispensary work, instead of being looked down upon, is sought by the very best men. This is as it should be, and, as a consequence, it need not be said that our dispensary is admirably conducted. The patients receive treatment from a staff consisting of four surgeons and nineteen physicians, of whom the requisite number are in daily attendance in their several departments. There are likewise nine district physicians, whose work is that of all outside physicians among the poor. But while in some American cities the district physician receives no other remuneration than such experience as he may gain — (this, by the way, has always struck me as being a very short-sighted and unjust arrangement) — in Boston he receives $200 per year during his term of service. The dispensary is in charge of a superintendent, an apothecary and his assistant, all of whom receive fair salaries, the whole being supervised as is usual by a board of managers.

In the report of 1878 it may be seen that 22,694 new and about 30,000 old patients were treated at the dispensary, and that there were 17,160 district patients, among whom the death-rate was but 3.2 per cent., which is a most excellent showing. The entire cost of treating these sixty-nine thousand and odd hundred patients was only $8,977.46.

One of the regulations of the dispensary is the following:

" ART. 5. *Medical students shall have the privilege of attending at the office of the dispensary*, but shall in no case be permitted to prescribe for or operate on any patient. The privilege thus granted shall be for the space of one year, and may be interdicted at any time by the executive committee."

Of itself this regulation renders the dispensary a most valuable institution, for, in a short space of time a student is made familiar with a wide variety of cases. He not only sees and can examine each case, but the treatment as well. And knowing the diagnosis, he can easily acquaint himself with the leading symptoms. Moreover. the physicians of the dispensary are at liberty to form private classes of students, and, having large numbers of patients from which to choose, they can fairly illustrate every subject of the course. This is especially true of the courses in auscultation and percussion. So that students of the Harvard school may make themselves practically familiar with the proper manner of working out a diagnosis. They not only have a clear presentation of the theories of a given case, but can also study and memorize symptoms upon the patient.

This is a wise and beneficial use of the dispensary patients, which in the dispensaries of other cities is not permitted. Consequently, students not being admitted, a vast quantity of clinical material which should be but is not utilized for the instruction of medical students, goes to waste.

As an illustration of this mistaken policy, I may mention an instance in which application was made to the old Philadelphia Dispensary, for permission to use the patients in a private course in chest diseases. Permission was refused, because of the antiquated and foolishly conservative policy of the board of managers. Indeed, but for a sort of shrewd game of euchre, Strawbridge would never have managed to get possession of the many eye cases which have created the excellent success of his department of this dispensary. As it was he very nearly failed.

We have a so-called "Consumptives' Home" in Boston, which is very curiously managed by its head, Dr. Charles Cullis. It includes a "spinal home" for spinal patients; a "cancer home;" a "faith cure home" for the temporary care of patients coming from a distance; children's homes, which care for children of patients until the parents recover. If they die, the children are adopted by the Home. In the advertisement of this institution its therapeutics and means of support are announced in the words: "*Cures by Prayer. Supported by Prayer.*" The manager, Dr. Cullis, it is said, seeks no financial aid except only and wholly by prayer. It is affirmed that he never in any case has asked a single individual for money. However, this may be, the institution has grown from nothing to an extensive establishment. As to the efficacy of its therapeutics, I have just heard of a case in which a large abscess developed in the cervical glands of a consumptive inmate. Dr. Cullis refused to put in the knife, preferring to confine himself to prayer. Somehow, the poor sufferer was carried to the City hospital, where the prayer was answered through the hands of those who help themselves and thus receive help. After which the girl was returned to Dr. Cullis. All of which will be considered peculiar.

In a former letter I promised to advise you of the forthcoming discussion, in the councilors' meeting of the Massachusetts Medical Society, of the question of the admission of female practitioners to the examination for entrance into the society. The meeting and the discussion came off the other day. The former was well attended, and the latter was warm and breezy. Opinions were very diverse. But it happened that prominent members who formerly opposed the innovation, voted in favor of it. Others stood by their guns and fought hard against it. Still, it was thought best to discuss the matter fully and exhaustively, so that it might be settled once for all. It has hung fire a long time, and members were tired of it. The result was that the new departure received the vote of a majority, but a small one.

The question having been brought to an issue, it is thought that the effect of the decision will be practically trivial. In New York and Rhode Island, medical societies have opened their examinations to women, but less than a half dozen of the latter have been successful. In our State the Censors have made the examination so rigorous that it is by no means easy for a medical graduate to pass. I need not say that the stronger minds hope the noble old society will not lose its time-honored dignity. It will be severely tried by the admission of women, and it will not be surprising if many members refuse to attend the annual meetings. Notwithstanding the fact that the council is composed of one out of every eight members from all parts of the State, the very small majority is a strong indication that if the vote could be taken in general meeting, the result would be the reverse. One thing is absolutely certain—if the decision were left in the hands of the Boston members of the society, it would bring forth a decided NO.

On the other hand, if women are to be admitted, the question of their medical education at once comes to the surface. And this, perhaps, will re-open that other question viz: their admission to the Harvard Medical School on equal terms with men. Otherwise how can Massachusetts women secure a medical education of such quality as will fairly admit them to the society? In spite of the decision of the councilors of the society, this matter is by no means settled.

If the doors of the Harvard Medical School are ever opened to women, it will be by the overweening influence of non-medical committees, whose members do not begin to conceive what it means to unite young women with young men in the co-study of medicine, surgery and obstetrics.

No delicate, womanly woman can thus unsex herself. And the women who can associate themselves with men in a full course of medicine and surgery are precisely those who lose that chivalric respect which manly men feel for true womanhood.

Far be it from all broad minds to object to the adoption of a medical life by women, but let them have their own schools, otherwise female medical students will become a sort of germ, a distinctive class of women. * *

BOSTON, Oct. 15, 1879.

Editorial.

THE MISSING LINK.

An orator, of popular reputation, recently declared that a fact would fit every other fact in the universe. It is a living and striking truth. The real advance of science will always be in the direction to which established fact points, and he who retraces the line of that advance will encounter every genuine observation which has preceded.

In the last number of this journal we published a full abstract of a paper by Dr. Heitzmann, entitled, Microscopical Studies on Inflammation of the Skin, which seems to mark an epoch in the progress of anatomico-pathological investigation. There are few, if any men in this country, capable of giving as lucid and original an exposition of the subject which he has so carefully studied. Though his paper might, in one light, be considered as chiefly interesting to the members of the Association to whom it was read, it yet in itself demonstrates the fallacy of supposing that any one organ of the body can be studied to the exclusion of others. It opens to the consideration of the profession at large, questions of the widest importance and interest. Much that was expressed by the writer was the result of original investigation. Regarding it, however, for the moment, as the latest exposition of the fruit of the labor of several observers, one can not fail to notice the change it foreshadows in accepted doctrines as to the ultimate constitution of living matter, and the performance of that matter when in a state of inflammation.

For more than a quarter of a century, the medical mind has regarded the " cell " as the single fact of importance in the animal economy, both in health and disease. The term, "cell," involves the idea of an enclosed space or cavity. What questionings and searchings has the word not occasioned, since the object it signified first became defined through the primitive objective! Had it an enclosing wall? Had it an enclosed cavity and contents? Did the "cell" produce the "nucleus;" or the "nucleus" the "cell?" In what relation stood "nucleus" and "nucleolus?" Was it reproduced by fission, or by the escape into the surrounding space of its so-called "granules?" These are not a tithe of the problems which rapidly presented themselves.

The result was that the "cell" came to be regarded as the sole unit, potential for good or ill, in every organ or tissue of the body. As Sir Thomas Browne, regarding the macrocosm, of the great world around him, found a still greater when he looked into the microcosm, or little world, of his physical frame, so, in the medical view, the "cell" became the still greater microcosm of the entire body, an autonomous, reproductive and energetic unit from which the macrocosm was built.

Nor with this, were we content. The "cell," source of all vital activity, became also the active agent in disease. It carried pestilence from man to man, and even from animals to man, and the reverse. "Cancer cells" invaded this tissue; "syphilis cells" that. "Giant cells" threatened here; "small cells," there. We found "broods of cells," "nests of cells," law-abiding and law-breaking "cells."

Exported from the body, they possessed, too, a wonderful activity. They floated in the air and were inhaled of men. They swam in water, and were swallowed by men. In turn, also, they were expelled from all the excretory canals. They were spat, vomited and coughed up. They were cast out from every viscus, whose contents escaped to the external world. Nor was this all. "Cells" of the vegetable world were thought to play their part in the production of disease. There was a plant whose "cells" caused measles; another begat malaria; still another, Asiatic cholera. 'Twas enough to satisfy the soul of Hahnemann himself, who divided all disorders into external and internal itch.

But, a few years ago, certain "cells" were seen in the mucous layer of the epidermis, notably those lying near the papillary layer of the corium, which possessed peculiar projecting spines or points. This fact was held to mean merely, that a new kind of "cell" had been discovered. Yet the significance of the spines or points was not clear. One observer thought they were the media of communication between the "cells" and the nerves; another that the prickles of the so-called "prickle cells" were lymphatic radicles; still another declared that the "prickle cells" hung together by their points; and two microscopists decided that the spines or thorns were interlocked, like the teeth of two adjacent cog-wheels.

Finally, the truth dawned. The spines, prickles, thorns or projecting points were found to be an integral part of the bodies with which they were connected. These bodies were not "cells," but masses of living matter, protoplasmic bodies. They were constituted of a delicate reticulum of living matter, the points of whose intersection formed the so-called "nucleus," "nucleolus" and "granules." Each of these masses of living matter was uninterruptedly united with each adjacent mass of living matter by innumerable spokes or threads of similar constitution. Nor was this true of the rete only. These cords penetrated to the corium, and thus it became evident that the epidermis was joined to the derma in the bonds of a most intimate union. Every mass of living matter was thus in direct connection with every other mass of living matter in the skin. The microcosm was but a part of the macrocosm, after all. The living human body was the real unit. It was found to be clad in a most cunningly devised cloak, a wonderful web of life, with living matter developed most at the points of intersection of warp and woof. In the lifeless cement substance filling the meshes of the web, there were but beaded nerve-fibers of great delicacy, and channels where a nutritive fluid might flow.

In the former belief, the relation of the tissue-elements was illustrated by the isolated cells built in its hive by the honey-bee. The new demonstration represents the living matter by the comb of the same insect, with a lifeless cement-substance in its meshes, represented by the honey.

Who will say that this relationship can be seen only in the skin! It is but reasonable to believe that it extends to all the tissues of animal life.

Dr. Heitzmann gives us the first fruits of these valuable facts, in his discoveries relating to the inflammatory process.

He leads us beyond the "exudation and pus-cells" of Rokitansky; past the "cellular pathology" of Virchow; further even than travel those arrant tramps, the vagrant leucocytes of Cohnheim; leaving far on one side the position of Stricker, who taught that each of his predecessors had a partial glimpse of the truth.

Dr. Heitzmann shows that the process of inflammation is essentially one which concerns the living matter itself. In its earliest stage, the epithelia, or protoplasmic bodies, become swollen, thickened and coarsely granular, in circumscribed spots, as a consequence of the increase of living matter within the bodies themselves, and an augmented influx of nutritive material. The points of intersection of the living reticulum, hitherto known as "granules," become enlarged, as well as the threads which traverse the cement-substance. Dilatation and engorgement of the vascular capillaries in the neighboring papillae ensue, while the protoplasmic material here also undergoes a change similar to that noted in the rete. The connective-tissue bundles are also transformed into protoplasm. In this stage there is no proof of exudation beyond the process of liquefaction of the gluey basis-substance, of which the bundles are composed. The subsequent evolution of this process, as described by the author, is in exactly the course to which the first step here described points, and is in complete accord with clinical experience. But, for fuller details, from which it appears that many of the phenomena hitherto considered essential to the process of inflammation are really epiphenomena, our readers must be referred to the author's text.

If the "cell-doctrine" be threatened with destruction, we may rest assured that from its ruins will rise a clearer appreciation of the interdependence of every part of the organism, both in physiological and pathological states. Every hitherto-established fact will stand. Many unsupported theories will fall. They who have looked on with incredulity and impatience, while men have sought absolution for physical errors in the earth, the air and the water around them, may find that day one of promise.

One might almost believe that the English laureate, in a spirit of poetic prophecy, penned the lines:

"The tiny cell is forlorn,—
Void of its little living will."

American Public Health Association.—The next annual meeting of this important association will he held in Nashville, Tenn., commencing on the 18th of November and closing on the 21st. We copy the following announcement in regard to the chief topics that will engage the attention of the association at that meeting, for the information of our readers:

ANNOUNCEMENT.

The executive committee of the American Public Health Association has decided to supplement the discussion on certain points relating to city sanitation heretofore ordered for the Nashville meeting and announced in the president's circular of August 15, by one on the practical questions connected with the management of an actual or threatened outbreak of yellow fever. It is considered proper that the whole country should have the benefit of the practical lessons taught by the epidemic visitations of 1878 and 1879, and it is fit that the popular diffusion of this knowledge should be made through the medium of this association, which will have an unusually favorable opportunity at the meeting in Nashville, November 18–21, for collecting and recording the conclusions of intelligent and skilled observers as to the practical working of the measures recently put into operation by State and municipal authorities, aided by the national board of health, with a view to prevent the spread of the disease from local sources of infection.

The oral discussion will be prefaced by the reading of several papers by members of the association who have been actively engaged in this practical work during the prevalence of the existing epidemic in Memphis and elsewhere. In order to give definite direction to the discussion the executive committee has adopted the following schedule of the points to be especially considered:

1. How to deal with a city in the yellow fever zone in order to prevent the appearance of a first case.
2. How to prevent the importation of a first case.
3. How to deal with a first case and early cases generally when, in spite of precautions under first and second headings, it has made its appearance.

4. The duty of local boards of health, or other health authorities to report such cases promptly, even though there may be some doubt as to the diagnosis. Whether the knowledge that such reports would be faithfully made would not have a tendency to allay apprehensions and give confidence to other communities while warning them of the importance of making preparations for contingencies.

5. Under what circumstances may it become necessary or expedient to remove the unacclimated portion of the population from an infected place? How may this be effected for the poorer classes of the population, and how should the people thus removed be cared for and supported?

6. Measures for isolating a dangerously infected place.

7. Organizations for the relief and treatment of the sick in an infected city.

8. Measures for preventing the spread of the disease from an infected place by railroads, including the management of transfer stations.

9. Inspection of steamboats at an infected place and at intermediate stations between the port of departure and their final destination. Should stations of observation be established by the national board of health? If so, what should be their relations to the health authorities of the States within whose territorial limits they may be established?

10. Results of the co-operation and aid given by the national board of health to State and municipal boards under the provisions of the act approved June 2, 1879. What suggestions may be made to render this system more efficient?

J. L. CABELL,
President American Public Health Association.

The following is the circular above referred to:

To the Members of the American Public Health Association:

GENTLEMEN: At a meeting of the executive committee, held in Washington, January 3, 1879, it was decided that the principal subject for discussion at the next annual meeting of the association, to be held in Nashville, Tenn., 18th–21st November, shall be the sanitary condition of cities and towns, especially those of the Southern States.

In selecting a subject of so wide a scope the committee considers that it will be expedient, if not indeed indispensable to the attainment of useful results, to limit the inquiry to certain specified branches of the general subject rather than to attempt to cover the entire ground of city sanitation.

A few years ago a committee appointed by the association prepared a series of elaborate schedules of questions for facilitating such an inquiry, which have been recently published in pamphlet form as circular No. 2, of the national board of health. A copy of this pamphlet will be furnished to any member of the association who desires to take a part in the proposed discussion, on application to Dr. T. J. Turner, secretary of the national board of health, and a member of the executive committee of this association. His address is, "Office National Board of Health, Washington, D. C."

The executive committee recommends the following subjects of inquiry: Water supply, schedule C; drainage and sewerage, schedule D; disposal of garbage and excreta, schedule H; slaughter-houses and abattoirs, schedule K; public-school buildings, schedule M; public-health laws, regulations, etc., schedule R; expenses of municipal sanitation, schedule U.

Attention is also called to the following resolution, presented by Dr. A. L. Gihon, U. S. N., at the last annual meeting:

"*Resolved*, That the executive committee be directed to provide for the investigation and discussion, at the next annual meeting, of the most effective means for preventing the spread of venereal disease."

Members who propose to consider these subjects, or who may desire to treat exhaustively some special subject of their own selection, are invited to prepare papers not to require more than thirty minutes in reading, and to forward titles and abstracts in accordance with section 8 of the constitution.

J. L. CABELL,
President American Public Health Association,
and Chairman of Executive Committee.

UNIVERSITY OF VIRGINIA,
Charlottesville, August 15, 1879.

MORE MEDICAL COLLEGES.—Last year the two medical colleges previously existing in Indianapolis, Indiana, were united into one; but in the October number of the *American Practitioner*, we are told that a second school has already been organized and is in operation in that city. It appears that a second medical school also exists in the ambitious city of Fort Wayne, which with the one at Evansville, makes five medical colleges in the State of Indiana; and yet only just enough students in the whole, to sustain one really good college.

We fully agree with the sentiment expressed in the following paragraph from the article alluded to in the *American Practitioner:* "A divorce between teaching medicine and the right to practice medicine, this journal advocated many years ago. It is one of the essential points in medical legislation. Such divorce obtained, and an honorable rivalry will exist among medical teachers to make thorough students instead of to get large classes—students who will pass with honor the rigid ordeal of a licensing board."

Such divorce we advocated many years before the *Practitioner* had an existence, and have continued to advocate it earnestly for more than thirty-five years; not only because it would make teachers and colleges rival each other in the extent and thoroughness of their instruction, but also because it would compel students to select and attend the colleges that gave the most thorough and complete instruction, instead of those whose fees and requirements were at the minimum end of the scale. D.

INTESTINAL OBSTRUCTIONS.—The clinical lecture that we copy from the *British Medical Journal*, in the present number of the JOURNAL AND EXAMINER, though headed "On Malignant Stricture," will be found to present a very full and interesting discussion of the diagnosis and treatment of intestinal obstructions, and will repay a careful perusal.

The statistics of suicides in France, just issued, show that nearly six thousand persons committed suicide last year.

Selections.

CLINICAL LECTURE ON MALIGNANT STRICTURE OF THE HEPATIC FLEXURE OF THE COLON. By JAMES E. GOODHART, M.D., Assistant Physician to Guy's Hospital and the Evelina Hospital for Children.

The case to which I invite your attention, gentlemen, to-day is one of stricture of the colon; but, in order that those of you who know little about such things may follow me the more readily, it will be advisable in the first place, to mention the common symptoms of intestinal obstruction, and also the varioas causes of the same.

The symptoms are, vomiting; griping abdominal pain; constipation; more or less distention of the abdomen; abnormally visible peristaltic action of the bowels; and possibly, in some cases, diminished quantity of urine.

According as the obstruction is sudden and complete, or slow and for a long time incomplete, in its onset, you can readily understand that the symptoms will be likely to differ. Thus, in sudden cases, the vomiting and constipation are immediate, and the abdominal distension follows soon after. In the chronic cases, there is usually a history of paroxysmal colic for some time before the onset of more urgent symptoms. The abdominal distension slowly increases, and reaches an extreme degree, and the vomiting and absolute constipation come on at this late period. Moreover, throughout the illness, the visible muscular action is usually a prominent symptom. This is, I think, the simplest division of intestinal obstruction—into acute and chronic; and you will find that the various forms are readily classified in this way for clinical interpretation. It is not very elaborate, and therefore proportionately liable to error for exceptional cases; but it is correct for the majority of cases. Some writers attempt to classify according to the seat of the disease; this comes very much to the same thing, but is not quite so simple.

The following causes are usually enumerated:

	1. Plugging of the intestine by foreign bodies and concretions.
Acute.	2. Internal strangulation. 3. Volvulus.
Acute or Chronic.	4. Intussusception.
Chronic.	5. Contractions. 6. Strictures.

Of these six, the first, except when due to a large gall-stone, is very rare, so that it need not detain us. Nos. 2 and 3 are associated with very acute symptoms, early vomiting, pain, and distension of the abdomen. Intussusception occupies a somewhat intermediate position, as it is sometimes acute, sometimes chronic; and 5 and 6 usually have chronic symptoms.

The case is that of a man aged 27, admitted into the clinical ward on May 22nd, 1878, and who died on May 31st. He was an Irishman, born in Killarney, and had had no illness that he was aware of, with the exception of measles, and, four years ago, of gonorrhœa. His father and mother are alive and healthy. He has drunk very freely of spirits and beer, being for some time a bottler of whisky, when he used to imbibe more than a pint *per diem*. From Killarney, he went to a sugar-factory at Bristol, where he used to drink considerably more than three quarts of beer in the day. During the last twelve months, he has not drunk nearly so much, only taking spirits at long intervals, and about a quart of beer per day. During the last nine months, the patient has suffered from attacks of griping pains in his right side, more especially after taking beer; he has never noticed that the pain was increased by food; and he has been so little troubled by it as to take not much notice of it.

About two months ago, he caught a bad cold, and was confined to his bed, and treated by a medical man. He then first noticed a hard swelling in his right side, just below the ribs. Previously, he had felt in good health, and had been able to work and eat well. He now began to have pain in this spot; and though he got better of his cold, and began to work again, he felt weak, and his appetite failed; a month ago he was seized with severe pain in his right side and for two days his bowels were confined. This attack passed off, but only to be succeeded by another in a week's time. The pains generally came on in the evening, and, after lasting twenty-four or thirty-six hours, would go away. During the pain, he was always sick, and, in so doing, was relieved. The vomit was bilious, green or yellow. Sickness never came on immediately after food, nor has he ever thrown up any blood, but the ejecta have been of the nature of coffee-grounds. The vomiting has only existed for the last four weeks. The bowels have been irregular, at one time constipated, at another loose. The motions have lately been very black. He thinks he has wasted in the last three weeks. He has been able to take solid food till the last week, but since then has kept to milk and brandy.

When admitted, he is described by my clerk, Mr. Malpas, as of a dark and sallow complexion, slightly jaundiced, with worn, pained, and somewhat pinched-looking face. He lies in bed on his back, with his legs drawn up; this being his most easy position. His tongue was furred and moist. He was always thirsty, but quite without appetite. The bowels had acted not long before he came in.

The abdomen was not at all distended—rather the reverse; so much so, that a tumor now to be described gave a slight prominence to the surface immediately over it. It occupied the right hypochondrium and right umbilical region, extending for an inch below the umbilicus. Its lower edge was well defined, but not its upper; the whole mass very tender and very hard. It was comparatively dull, but yet distinctly resonant on percussion, and between it and the right rib there was very distinct resonance; above this, came the hepatic dulness as usual, extending half a space higher than its normal limit. The swelling moved but very little, if at all, during deep inspiration. The pain came on in paroxysms, and, during them, the tumor became visibly more rounded, but there was no visible peristalsis. All the viscera seemed normal, and the temperature was normal. There was no ascites; no jaundice worth the name; no enlargement of the surface veins.

These, gentlemen, are the details of this case, wanting only that which no description can give—the something over and above the mere symptom which the eye takes in at once, and which is often all-important in making the diagonsis. However, I do not know that there was anything very striking in this man's appearance except that he was very pale, and looked proportionately ill. Will any one suggest a diagnosis?

Well, first of all, what may the symptoms indicate? A hard, somewhat nodulated lump between the umbilicus and the right ribs. In that region are the liver, gall-bladder, pylorus, head of the pancreas, the hepatic flexure of the colon, and, behind these, the suprarenal capsule and kidney, and some lumbar glands; and, lastly, mesentery and omentum may be displaced anywhere, and therefore must be mentioned. Bear in mind, too, that spinal curvature—lordosis, as this form is called—will sometimes so push forward the pancreas and aorta as to simulate an abdominal tumor or aneurism. To remember this, is to make your diagnosis so far as *it* is concerned; because it is, of course, easy to examine the length of the spine; and, when there is curvature of one part, there is nearly always curvature of another part compensatory; This patient has no spinal curvature.

Then to take the other possibles *seriatim*. Had he any liver affection? What liver diseases are liable to occur in a young man of twenty-seven? First, there is hydatid disease, which has these features: that the tumor is cystic; that, therefore, it gives the physical signs of fluid, viz., a thrill—in some cases a peculiar thrill—and the globular elastic tumor, generally speaking, bulging well into the right hypochondrium. It is a swelling comparatively free from pain. It is associated with little or no disturbance of the health. These are conditions, you will observe, that do not tally with those in this case. The tumor was not cystic, but very hard and unyielding. It was not even globular; nor did it occupy the region of a hepatic cyst; and instead of being unassociated with disturbed health, the man, as I have told you, was evidently very ill. In these latter points, however, it might agree with the symptoms of hepatic abscess or suppurating hydatid; but then, again, these would give the same cystic bulging of the liver if they gave any sign; and it was not present. Then some syphilitic disease of the liver—was it that? Syphilis leads to the formation of large hard masses in the liver, which produce much matting of the surrounding parts, and therefore occasionally give rise to a good deal of pain; so that it might have been something of that kind, even though there were no other traces or history of anything of the kind. And, lastly, was it any malignant growth in the liver? Well, that is so exceedingly uncommon as a primary disease in anybody; and in a young adult of twenty-seven still more so, that any opinion of that sort was mentioned only to be dismissed. So, then, of all the possible affections in the liver, we have only one left, viz., some gummatous inflammation. But I did not think it was a mass connected with the liver at all; first, because the tumor itself was distinctly resonant; and, secondly, because there was still more marked resonance between the lump and the ribs, above the margins of which came the normal hepatic dullness in due course. You occasionally find a large liver coming some way below the ribs, overlapped by or covered by some intestine; so that, though really enlarged, the abdominal portion is hidden; but I never saw a liver covered above by intestine and protruding below; and, if you think a minute, such a condition is hardly possible, considering the relation of the intestine to its mesentery. Such a condition is just possible with regard to the gall-bladder; that the coils of intestine might enfold the viscus, and become adherent round it, giving resonance above it, and some transmitted resonance over it; and the gall bladder is rather liable to set up inflammation round it, and fever. It becomes over-distended, and inflamed because over-distended. But I did not much think this was gall-bladder, because distension of the gall-bladder in young people is usually associated with some jaundice, and this was not; for though Mr. Malpas tells you the man was jaundiced, I think it would have been more correct to leave the earlier report, that the complexion was *sallow*, without the addition. He was sallow, no more. Then, too, the fundus of a distended gall-bladder is not often adherent to the surface to such an extent as to produce a lump so defined as this was. It is pyriform elastic swelling, to be felt only with care. Then, too, both liver and gall-bladder descend freely during inspiration; this tumor did not; though, of course that symptom is liable to be modified by adhesion, should this have occurred.

Then we may take the kidney and suprarenal capsule; and I may at once lay down this rule: that, unless very large or abnormally mobile, enlargements of these viscera do not produce any well-defined tumor so superficial as this was. A man may have twenty or thirty ounces of kidney in each loin, instead of four or five; and, unless there be any special renal symptoms, the tumors will very probably not be detected. This is because they are behind all the coils of intestine, and push these forward, so that the swelling is masked in this way. Renal tumors are indicated by a general fullness of the abdomen, or ill-defined resistance in either loin; and then, on careful manipulation, you will get fluctuation and so on. Now go and verify this for yourselves in the case of 19 in Philip ward. There is a man who has had symptoms of renal calculus on the right side. Go and examine his abdomen, and you will have learnt a lesson you will not forget. The same thing applies to the suprarenal capsule, though less generally, because growths in it of any size are apt to push forwards towards the median line, and may appear as definite tumors well defined, by pushing up the pancreas in front of them. As an outside chance, I put down tumor of the suprarenal capsule.

We have now left the pyloric region of stomach and colon, omentum and mesentery. The pancreas may be left out of the question, because I might say the same of it as Sir Walter Gull used to say here of the jejunum, "that it has no pathology." That is a fact, though, worth your thought. Sir W. Gull used, I say, to take the ileum, jejunum and duodenum, and enumerate the diseases of the first and the last, and find nothing to score against the jejunum. This is so; the jejunum is but rarely diseased primarily: and what is true of the jejunum is true of the pancreas, so far as we know at present; its diseases are not numerous. As between the remaining possibles, I said this: First, that the paroxysmal griping pain associated with vomiting that this patient suffered, and also the visible swelling of the abdomen which occurred at the seat of the tumor, together with the resonance over the tumor, were proof of some matting of the intestine, and so an impediment to its healthy, painless muscular action, or else of some positive obstruction. There was, however, no distension of the abdomen, and the bowels, though not regular, were not confined; so I thought there could be no obstruction of anything more than a temporary kind; and, under such circumstances, intussusception or any malignant disease of the colon were hardly likely. I therefore turned to the stomach, the patient being a young man, and a former hard drinker, and suggested that he had some ulcer there, which had, as do so many gastric ulcers, slowly perforated into the tissues outside; making its way downwards and to the right, instead of backwards; and that the inflammatory thickening so set up had caught the intestine, and led to the paroxysmal colic. That was my diagnosis; but, in making it, I had to do some violence to two sets of facts. The first was remarked upon by some of you, viz., that the man had no symptoms of gastric ulcer. To this I replied, that gastric ulcer gives so few symptoms in many cases, that the absence of them is not to be relied upon, especially in hospital patients, who take so little heed of their symptoms; and, moreover this man had "coffee-grounds" vomit, and passed black stools—very like some gastric hæmorrhage. Secondly, the swelling in the abdomen was so hard, that I was strongly disposed to think it must be a new growth of some kind; and I also remarked that you must bear in mind that growths in the stomach and intestine do occur at earlier ages than most other growths; and I mentioned the case of a woman which is on record, where carcinoma of the stomach caused death at twenty-one.

Closer than that, there was no ground for going; and, upon that diagnosis, and the prominent symptom being the one of paroxysmal colic, we gave him half a grain of opium three times a day, and kept him on milk diet, hoping that by this means the muscular coat of his intestine would go to sleep, and let the supposed ulcer or inflammation subside. Unfortunately, he was already, only we could not see it, in a hopeless condition; but let me continue the report of the case.

In the first two days he was sick, and had severe paroxysms of pain; still there was no visible peristalsis. The next two days he was quite comfortable, without sickness, the bowels acting with normal motions, and only one short paroxysm of pain. He was so comfortable, and complaining of feeling hungry, that I was somewhat thrown off my guard, and consented to his having a little fish. Whether from this increase of diet or not, I cannot say, but, on the evening of the day on which fish was taken, he had sudden and severe abdominal pain, which produced speedy collapse; and, notwithstanding a liberal administration of opium, wisely given by Mr. Horrocks, when I saw him the next day he had the sunken eye, the cold skin, the thready pulse, of a patient with acute peritonitis on the point of death. After this, he vomited everything given him, which was very little; for I believe the best treatment in peritonitis is to give no food at all, and plenty of opium; and he died about sixy hours after the onset of his last attack of pain.

The *post mortem* made the same afternoon discovered a cancerous stricture of the hepatic flexture of the colon. This had led to ulceration above it in the ascending colon, and a large fæcal abscess had formed in the right hypochondriac and lumbar region. Suppuration had extended from it to the viscera in the neighborhood, and so to the general peritoneum. We also found evidence of old peritonitis in the form of old adhesions; and these were associated with, and probably due to, old tabes mesenterica, or caseous and now calcareous disease of the mesenteric glands.

Now, remember my diagnosis was gastric ulcer, opening into the tissues outside the stomach, and so leading to the formation of inflammatory material, which had caught up the colon and impeded its action, but had not constricted its calibre to any great extent. Inflammatory products outside the stomach there were in plenty, but they originated not in the stomach, but in a stricture of much tightness in the colon.

How was it that we failed to diagnose this? Well, because proper or usual symptoms were absent. The symptoms of stricture of the colon are paroxysmal colic, visible peristalsis, constipation, and distention of the abdomen; and, of these, some are more significant than others. For instance, the paroxysmal pain is present in most intestinal inflammation and obstruction, whether in small or large intestine. The visible peristalsis may or may not be present; but, at any rate, in a tight stricture of the colon you would expect to find constipation and distention of the abdomen. If these be absent, I hardly know any condition which would enable you to make a diagnosis; and I do not see in this case, now that we have the *post mortem* to guide us, how we could have arrived at a perfectly correct opinion. If there be no distention, you will be justified in assuming that obstruction, if it exist, is very high up in the small intestine; or that it is a general contraction, such as I mentioned to you; or that it is not complete enough to hinder to any material extent the passage of the intestinal contents. I took the latter view in this case.

But the *post mortem* shows, I think, why the important symptoms were absent; and, in so doing, conveys a very important lesson that can be learnt in these cases. Remember that the stricture occurred at the hepatic flexure of the colon, and that above that, ulceration had occurred in the mucous membrane of the bowel, and a communication had thus formed between the intestinal canal and the loose cellular tissue outside in the loin. This had allowed of the escape of a quantity of the contents of the bowel into the large abscess we found, which was without doubt due to the ulceration of the intestine, and some relief to the distention of the bowel above the stricture.

Now, it is a well known fact of *post mortem* experience that strictures of the bowel are *never complete.* There is always a certain amount of channel left, usually enough to squeeze the index or little finger through. So that it is probable that the fatal obstruction occurs from some temporary condition of the canal, which converts the partial into a complete obstruction. The treatment of these cases quite confirms this. Many are the cases, even of those which eventually have proved themselves due to carcinoma of the bowel, where the temporary condition has been tided over and the complete obstruction relieved. The conditions which cause this appear to be either paralysis of the muscular coat of the bowel; or some alteration in the direction or irregularity in action of the muscular force, by which means the contents fail to be propelled through the narrow canal in front of them; or some alteration in the contracted ring of bowel by which the existing canal becomes temporarily still more narrow. But whether one or all of these conditions hardly matters, because they all result more or less immediately from over-distention above the stricture. So that, in treating these cases, this is what you aim at, the unloading of the bowel above the stricture and keeping it as empty as possible. If you can do this, the symptoms disappear and the patient regains health, which of course will be lasting or not according as the stricture is carcinomatous or not, and according as the over-distention can be obviated in the future.

The most obvious way of accomplishing your object is, to those who have not seen the ill effects of their administration, to give purgatives, the *rationale* of such treatment being, no doubt, apparently to stimulate the muscular coat behind the obstruction and so to force the contents of the bowel through the stricture, but this is what does not happen; purgatives seem to create somewhat analogous conditions to those occurring when a large theatre or church full of people is set on fire and all the occupants attempt to rush out at once. You know what happens. Half are crushed at the doors and the other half burnt inside. Convert that into terms of intestinal obstruction, and the result of purgatives is generally either to produce ulceration of the bowel above the stricture or to make the obstruction more complete than before.

The proper procedure first at hand is to reduce the contents of the intestine above and below the stricture to the smallest possible amount. Above, you are helped in this way by the vomiting which is usually present: and all that it will generally be necessary to do will be to be passive, and put no more in to replace that vomited. Your duty is to starve—yes, literally to starve—the patient. He may suck a little ice, and have a mouthful occasionally of the weakest broth; and this rather to calm his mind than to sustain his strength. We need not mind about that. Most of these patients have a certain reserve in their blood and tissues to fall back upon; and in bed strictly at rest they are in no danger of dying from a day or two of foodlessness. You will clear the intestine below the stricture by copious enemata frequently repeated. Then, as to drugs, the first and by far the most important one is opium. This controls and moderates the intestinal muscular action, and in so doing, without any other means, will often put a stop to the obstruction. So quickly does it accomplish this sometimes, that the opium pill would almost appear to act as a purgative, only that positions are changed now; purgatives constipate, sedatives open the bowel. If the symptoms are severe, give no more than opium and wait; but in the less urgent forms of obstruction, both belladonna and nux vomica are of use.

With regard to belladonna, Dr. Norman Kerr has published some remarkably successful cases of the subsidence of the symptoms of intestinal obstruction under one and two grain doses of the extract, given at frequent intervals. I have lately had a case under my own care where I pursued a similar plan, the patient taking twelve grains of the extract in about thirty-six hours; but, unfortunately, the result was not successful; peritonitis supervened, and death took place as colotomy was being performed. I do not wish to imply that this treatment is valueless. I think now that the case was perhaps of too long standing to allow of any hope of success except by operation; and would suggest that the belladonna should be exhibited in the earlier days of the obstruction if it is to succeed. We certainly lost valuable time, which might have allowed of successful colotomy, while pursuing the belladonna treatment.

I see no reason why ergot and digitalis should not be of use also; though they are less generally applied to. All such drugs, acting as tonics to the muscular coat of the bowel, induce a more persistent and forcible *vis à tergo*, replacing an irregular and inefficient muscular action. These, with warmth to the abdominal parietes, will be successful if any measures are of avail, and it will not often be necessary to do more by way of drugs. Some advise the administration of oil and other fluids to liquefy the intestinal contents; this is quite unnecessary, and even harmful, by adding to the quantity of liquid above the stricture, for it is a rule, to which I have seen no exception on the *post mortem* table, that *the intestine above the stricture is distended by fluid fæces, not by lumpy matter.*

Well, then, should all these measures fail, and you have to do with stricture of the colon, and have only to consider the question of the relief of the stricture apart from its nature and other complications, then the proper thing to do, no doubt, is to open the bowel above the stricture by some surgical operation. Now, in deciding upon such a thing as this, it is perhaps more common to look upon the operation as a way out of a difficulty by avoiding it; as a means to secure a permanent opening above the stricture — an artificial anus in fact. But — and this is the point I wish to insist upon, for here it is that one of the points of our case comes out — in many cases you will find that after the colotomy the bowels act and continue to do so by the ordinary channel. You relieve the over-distension by the operation, and the obstruction ceases. So that the operation is remedial in such. You do, in fact, by operation what you have previously attempted by drugs, and do not merely use a makeshift.

A very interesting case of this sort has been published in the *Guy's Hospital Reports* by Mr. Hilton. A medical man suffered for some time from abdominal pain and constipation, and eventually the obstruction became complete. Mr. Hilton saw him after twenty-eight days, and agreeing with the other medical men in attendance that the seat of disease was in the rectum or sigmoid flexure, opened the colon in the left loin. Four days afterwards, evacuations began to pass *per anum*, and from that time this continued to be the case; and the opening in the loin gradually healed. Eleven weeks after the first operation, all the old symptoms returned, and it became necessary to reopen the colon, when again fæces passed naturally *per anum;* and again — though this time vigorous efforts were made to dilate the artificial opening, the incision healed at the end of eleven weeks. The patient went on for some weeks, when it became necessary to open the colon a third time. But by this time ulceration had occurred in the colon above the stricture, and a large abscess had formed outside the bowel, opening the hip-joint, and from which he ultimately died exhausted. He lived a year almost to a day from the time he was first taken ill, and eleven months after the first operation.

In our case, you will remember, there was no distension of the bowel, and nothing that could be called constipation, and I attribute their absence to a similar reason to that which existed in the case just narrated; viz., to the presence of a safety valve above the stricture, the only difference being that in the one case it was made by the surgeon, in the other by the spontaneous morbid process of ulceration; and in our case, instead of being remedial it was a case of "out of the frying-pan into the fire." I can only suppose, however, that the ulceration which we found in the ascending colon had allowed the escape of fæcal matter into the cellular tissue of the right loin, and in this way had in some measure relieved the distension which must otherwise, almost of necessity, have ensued above the stricture, and so the bowel was allowed to act.

You may perhaps think that some less hazardous means of relieving the distension than that of colotomy might be adopted, and another operation has been practiced with that end in view, viz., paracentesis. The distension is due partly to gas and partly to fluid fæces; and it has been thought that by withdrawing the former the severity of the case might be relieved. One of the distended coils has therefore been tapped by a very fine trocar and cannula. But there can be no doubt that this is an exceedingly dangerous thing to do; and I do not, from what I have seen and others have told, feel in the least inclined to recommend it to your notice. The danger is this: that the distension is, in the majority of cases, but little relieved — that alone is an objection fatal to its adoption — and the bowel remaining full and its walls tightly stretched, fæcal matter, which you remember I told you is *always* liquid, leaks out into the peritoneum after the withdrawal of the cannula from even the smallest puncture. I have myself seen this operation performed, and fæcal matter came out at once by the cannula, no relief followed, and the patient died not long afterwards of acute peritonitis. So do anything rather than this. You are taught, and quite correctly so, that small wounds of the intestine are comparatively dangerless, because the mucous membrane becomes everted and so closes the aperture; but this only applies to a contracted intestine; we are dealing with an overfull one. All the coats are in such a case distended probably to their utmost, the rugæ obliterated, and there is nothing to evert; and the smallest hole, under such circumstances, becomes a vent, and a vent, however small, in such a position, is fatal. Of course, all these points are beside the question in our case, because there was no distension of the abdomen and no constipation, so that we had nothing to consider but the treatment by drugs.

One other fact in our case must be alluded to, if for no other reason, because you will not find much about it in your books. We found evidence of old peritonitis, and the glands in the mesentery were caseous or calcareous, and there had evidently been a so-called tabes mesenterica of former date, from which the patient had recovered. That condition is of sufficient interest in itself to devote a lecture to; but the point in this case is, that such a state of things must of necessity somewhat modify the distension which we should expect as the result of obstruction, and might in some cases prevent it entirely. It may, in conjunction with the other previously mentioned conditions, have so acted here. It is quite obvious that if the intestinal coils are matted together and to the surrounding parts, and the mesentery itself be shortened and thickened, there is less chance at any rate of the usual uniform distension, and it may be, as I say, that none will be present.

This patient has been rich in lessons, in that the poor fellow is dead; but there is another patient now in Bright ward, whom you should go and examine — though do so tenderly — to compare with this. The case presents a similar amount of speculative interest as that I have just detailed did, concerning the exact nature and seat of the disease. I cannot now do justice to the very careful report of the case by Mr. Maylard; but, shortly stated, these are some of the features of it. She is thirty-five years of age, and was admitted into Bright ward under my care on March 1st, 1878. She is a married woman, of phthisical family. She has had six miscarriages and four living and said to be healthy children. Her last confinement was thirteen months ago. She appears to have suffered many things of many physicians, or rather surgeons, and has been an inmate of at least four of the metropolitan hospitals for typhus, rheumatic fever, erysipelas, etc. Seven months before her admission, she noticed pain in the right umbilical and epigastric region whilst mangling. She vomited, and the pain was persistent. She tacked about between various dispensaries for two months or more; and a swelling was noticed in the abdomen by Dr. Stocker. A fortnight before she came here, she was seized with severe abdominal pain; vomiting, which all along had been occasional, had been much more severe; and for three days she had been unable to retain anything on her stomach. The bowels had been very confined, rarely acting under intervals of from four to twelve days. She looked pale and ill; and on examining the abdomen we found a tumor to the right of the umbilicus, a little lower than in the former case, but like it giving some resonance on percussion, and there was still more resonance between it and the margin of the ribs. It was ill defined at its margin, very tender to manipulation, and not displaced by deep inspiration. The abdomen was not distended. The morning temperature was over 100° F.

The difficulties in diagnosis here are similar to those in the man. The tumor has not in this case any of the hardness present in the other, and its position is somewhat lower; and for that reason, the ascending colon and cæcum must be added as possible seats of disease; and conning over the case, I look upon it as one of localized peritonitis, the cause of which is not evident. Possibly it is due to some ulceration of the colon or displaced cæcal appendix, possibly to disease of the gall bladder. We gave her half a grain of opium and a quarter of a grain of extract of belladonna in a pill three times a day, with hydrocyanic acid and bismuth, milk, lime- and soda-water; and, under that treatment, she had no return of sickness, though before it had been constant. Since that time, the chief additional symptoms have been that the tumor has shifted up a little, so that if you examine it now you might think it to be attached to the liver; that she has had throughout very considerable abdominal distension; that the bowels have been decidedly confined; and that she has had decidedly more distension and abdominal pain on a fuller diet than on a restricted one. There is, moreover, a history that, on April 3d, she passed a stone about as big as the top of one's thumb in her motion. The nurse stupidly threw it away, so we can only conjecture that it may have been a gall-stone. If this be so, a pretty good case would be made out, for gall-stones encysted in the gall-bladder; ulceration of the gall-bladder; adhesion by inflammation to the part around; ulceration into colon or some part of the intestine low down; and some amount of constriction of the bowel as a result of the inflammation. But this is all very conjectural, because she has repeatedly passed scybala, and the supposed gall-stone may have been no more than a hard fæcal nodule; and our diagnosis practically rests where it did at first at chronic peritonitis catching up the colon and producing partial obstruction. The treatment has been such as I described, and she has latterly had copious enemata by the rectum. The prognosis in the case is somewhat gloomy; she is getting tired of the hospital, and will go out before long. She will then pay no attention to her diet or bowels, and will in that case soon get complete obstruction; though I believe if she could be kept under observation and guidance she might get well. — *British Medical Journal.*

EPIDEMICS FROM A CHEMICAL STANDPOINT.* By R. OGDEN DOREMUS, M.D., LL.D., Professor of Chemistry and Toxicology in Bellevue Hospital Medical College; Professor of Chemistry and Physics in the College of the City of New York; Chemist of the Medico-Legal Society.

Dr. C. R. Agnew, formerly attached to the New York Hospital, informs me that in consequence of the reception of patients suffering from "ship fever," the north wing of the old building near Duane street became so saturated with disease-breeding agents that it had to be abandoned. This was about twenty-five years ago. The patients were removed from this wing; the windows were kept open for many weeks to accomplish thorough ventilation; the walls and ceilings of the wards were scraped and whitewashed, but in vain! Even the workmen engaged in this cleansing process were taken sick, and one or more died.

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* From Bulletin of the Medico-Legal Society of New York, January, 1879.

So many hospitals, or parts of hospitals, in Europe and in this country have become magazines of disease, puerperal fevers, pyæmia, etc., that many savans urge that the buildings shall be constructed of *wood*, and be burned up every second or third year.

When Pandora, the all-gifted, opened the fabled box and released its pernicious contents, which brought immeasurable suffering upon mankind, "the terrified female at length gained sufficient presence of mind to close the lid; and Hope thereupon was alone secured."

Prometheus, who formed the first man out of clay, kindled his torch from the chariot of Phœbus, with which he blew eternal flames into the breasts of his creatures. Notwithstanding the ire of Jupiter, he ascended a second time and brought fire from the sun.

The chemist was anciently designated the "philosopher by fire." Perhaps we are justified in saying that to him we should look to antidote, at least, certain of the evils set free by her whom Vulcan made, and intended to be the consort of the son of Iapetus.

By the potency of modern science, Hope has been released from Pandora's box.

We propose to show that spirit can be set at war with spirit, the combat resulting favorably to humanity.

There are no firmer believers in spirits than chemists; for they can make them of every hue of the rainbow, or colorless and invisible, or even black; of varying weights and odors; some grateful to our senses, others nauseating and disgusting; markedly differing in chemical qualifications—one the spirit of life, the vital air; while a host "whose name is legion" exist, and can at will be produced, which are destructive to life.

With but few exceptions, all poisonous emanations from humanity, in health or in disease, are compounds of the most gaseous of all gases, hydrogen.

This lightest of all known elements, when just released from combination with others, or in its "nascent" state, possesses marvellous powers of affinity. Thus, one pound of hydrogen can unite with sixteen pounds of sulphur, and can confer on this solid body its own condition of gaseity. With carbon it yields forms of illuminating gas; with many metals, as iron, zinc, arsenic, antimony, etc., it produces spirit-like bodies, some of which are most poisonous. Such substances as pus, vaccine virus, etc., are compounds of hydrogen; and future chemists will doubtless discover that all disease-propagating gases or germs consist in part of this particular ghost.

If, therefore, we can dehydrogenate them, or rob them of this spirit, we can destroy their power for evil.

To employ a political figure, chlorine gas is the great "ring breaker." It seizes upon the chief of the ring, *Hydrogen*, imprisons it, and breaks up the evil combination.

I have here a tall glass jar, the upper part of which contains sulphuretted hydrogen gas, the lower part water. On bubbling up through the water, this greenish-yellow gas, chlorine, as it reaches the ill-odored gas above, instantly deprives it of its hydrogen (forming with it hydrochloric acid); and you observe the yellow deposit of sulphur on the water, and upon the sides of the jar.

I now present a compound of carbon and hydrogen to this chlorine — black carbon is at once deposited, the hydrogen, by preference, combining with the chlorine.

Should I introduce the most poisonous form of arsenic, viz., arseniuretted hydrogen, to chlorine, the superior affinity of hydrogen for chlorine would be immediately pronounced; the hydrogen and chlorine would unite as before, and should there be an excess of chlorine, a chloride of arsenic would be formed.

Should chlorine be exhibited to a mixture of sulphuretted hydrogen and arseniuretted hydrogen gasses, it would deprive them both of their hydrogen; the sulphur and the arsenic, being in a "nascent" state, would unite, and form a sulphide of arsenic, yellow orpiment.

If a glass rod be dipped in anhydrous hydrocyanic (prussic) acid, which has been liquified by cold, on approaching the rod with its adherent drop to a rabbit, the animal falls dead before the poisonous liquid touches him — due to the inhalation of the vaporous or gaseous acid. If chlorine be presented to this most rapidly fatal of all the spirits, it instantly disarms it of its virulence by robbing it of its hydrogen.

If equal volumes of hydrogen and chlorine be placed in a glass flask in a dark room, on exposing them to the sunbeam they combine with explosive violence.

Hence we feel warranted in the assertion that if chlorine gas can be generated in great volume, and especially with the aid of moisture, which facilitates its action, it can dehydrogenate any of the virulent spirits which result from vegetable and animal decomposition.

In 1849 I was consulted by one of our largest transatlantic steamship companies as to the best method of disinfecting one of the state-rooms, which had been occupied by a passenger in whom small-pox developed a few days after leaving Liverpool.

The liberal generation of chlorine gas in said compartment accomplished the desired result.

In the summer of 1865 I had the pleasure of meeting, on Broadway, Prof. Lewis A. Sayre, M.D., then Health Physician to our city. He announced that the steamship *Atlanta* had arrived at quarantine from Liverpool with a large number of steerage passengers; that sixty of them had died of cholera! He requested me to accompany him to the Mayor's office to discuss what should be done.

I expressed to Prof. Sayre and Mayor Gunther that chemical agents, *if liberally employed*, could decompose and destroy all these disease-spreading agents; that ships could be disinfected in twenty-four or forty-eight hours better than by a detention of forty days for ventilation; that modern chemistry would enable us to almost abolish *quarantine* by shortening the customary delay which its name involves.

Carte blanche was given by the Mayor.

Accompanied by my assistant, Dr. A. W. Wilkinson, a visit was paid to Dr. Swinburne, then Health Officer at quarantine, who gave his cordial co-operation.

Among the most efficient agents with which we successfully disinfected the ship referred to as freighted with disease, and many other vessels which subsequently arrived from dangerous ports, was chlorine gas. Rolls of sheet lead were taken on board the vessels, with hundreds of pounds of common salt and peroxide of manganese ; also, carboys of sulphuric acid. The lead was unrolled, turned up at the edges, so as to make receptacles eight or ten feet in length and four feet in breadth. Into these troughs the salt and the manganese were mingled with water, forming a black mud, and when all were ready to leave the hold or part of the vessel where the troughs had been placed, a carboy or more of sulphuric acid was poured into the aforesaid mixture.

Huge volumes of chlorine were immediately given off; hundreds of pounds of this greenish-colored gas arose and diffused in every direction. The hatches were "battened down," and this potent element was left to accomplish our purpose, viz., to dehydrogenate, and thus decompose, the death-breeding gases and germs.

That this mode of treatment was eminently successful, was demonstrated by the fact that not a single case of cholera appeared in this city, or the cities connected with this port, or the section of our country to which the emigrants passed. So complete was the disinfection that not only were the ships purified, but also the articles of merchandise from infected ports, as well as the baggage of cabin passengers and emigrants. In previous years cholora was known to have been developed in the interior of this State from boxes and trunks containing household articles which had been brought from parts of Europe where the disease existed.

Who can estimate the loss of life and property had cholera been introduced into New York, and thus probably have been disseminated through the country ?

I am happy to learn that this process has been continued by my quondam college-mate, Dr. S. Oakley Vanderpoel, the present Health Officer at Quarantine, to whom our city and the country is indebted for his faithful and efficient services.

Three years ago I was asked by the present Commissioners of Charities and Correction to undertake the purification and disinfection of the surgical wards of Bellevue Hospital. In certain wards pyæmia had proved very fatal. The *heroic* chlorine treatment (if I may use this expression) was adopted for the wards, and ozone for the water closets.

Strips of paper were pasted over the crevices around the windows and doors. Troughs of lead, as before described, were brought into the ward; a sack of salt was emptied into them, and about an equal weight of black oxide of manganese. These were intimately mixed, by stirring them with water, by means of wooden shovels. A carboy of sulphuric acid was emptied into pitchers, basins and other vessels, and placed by the sides of the troughs. The floors were then wetted with water, and steam was allowed to escape from the heaters until the condensed moisture had dampened the ceilings and was trickling down the walls.

Half a dozen assistants groped their way with me through the mist to the sides of the most remote trough; each of us simultaneously poured out the contents of the vessels filled with sulphuric acid upon the salt and manganese, repeating this operation at the second trough. We then hastily made our exit, and nailed up the door, lest any one should accidentally enter; for the amount of chlorine thus liberated would have proved fatal to any one who might have ventured into its presence.

The next day the windows were opened from the outside, and after an hour or more of ventilation, we entered, and having first filled the earthen vessels with sulphuric acid, we stirred up the mass resulting from the previous day's reaction, then added this second dose of acid, and again rapidly retreated and secured the door.

In the first ward, where pyæmia had proved most fatal, the contents of the troughs, chiefly sulphate of soda and sulphate of manganese, were removed, and a second sack of salt, with its equivalent of peroxide of manganese, were mixed in them with water, and the full complement of sulphuric acid poured into the mixture, after filling the compartment with steam as before.

The walls and floors were then washed and scrubbed, after a third liberal treatment with chlorine was completed, twenty-four hours having been allotted for each dose of chlorine to fulfill its fell purpose, viz., to permeate the *plaster walls*, and the *very stones* of the hospital in search of its prey, the foul, death-dealing gases and germs that lurked in these hiding places defying all ordinary methods of removal.

After a day's ventilation and drying, the disinfection was considered complete. It was a pleasure to pass from the adjoining wards into the purified one; the mawkish flavor, so common to even the most cleanly hospitals, had entirely disappeared.

To test the efficiency of the chlorine gas, the cotton sheets were left on some of the beds when the first charge was employed. The next day these sheets were so tender that the least touch sufficed to crumble them to pieces. The woolen blankets were disinfected, but uninjured.

All the other surgical wards in the north wing of Bellevue Hospital were treated twice with the most liberal charge of chlorine. Estimating from the quantities of the chemicals employed, between *two* and *three tons* of chlorine gas must have been produced by the reaction!

The method described for generating chlorine is preferable to the employment of hydrochloric (muriatic) acid and the binoxide of manganese, because of the more copious yield of gas, as may be shown by the following formulæ:

$$2(SO_3\ H_2O) + MnO_2 + Na\,Cl = \\ SO_3MnO + SO_3NaO + 2(H_2O) + Cl.$$

Here all the chlorine is liberated from the common salt (chloride sodium), the sulphate of manganese and the sulphate of soda remaining; whereas, by the use of hydrochloric acid, only one-half of the chlorine is discharged as a gas; thus,

$$4\ (H\ Cl) + MnO_2 = Mn\ Cl_2 + 2\ (H_2O) + Cl_2,$$

the other portion combining with the manganese to form the chloride of this metal.

The first process generates heat by the action of the sulphuric acid and the water. This facilitates the diffusion of the heavy gas.

In consequence of the very pronounced odor of chlorine gas many persons, including physicians, and even those who have written on the subject of its applicability as a disinfectant, err in regard to the *quantity* that should be relied on. One distinguished physician narrated to me that he signally failed. He placed some manganese in a *saucer* and poured hydrochloric acid upon it! Need we wonder at the result?

In a recent medical journal sent to me, a description of modes of disinfection is given; under the head of chlorine the writer says, "Place four ounces of manganese on a plate and add hydrochloric acid to it!"

There are incidental advantages in resorting to sheets of lead as a suitable receptacle for the chemicals. Troughs of any length can be easily and quickly made; and after the residues of the reactions have been removed they can be rolled up into a compact form. By unrolling them and turning up the edges they can be used again, and as often as desired. The sulphuric acid forms an insoluble sulphate of lead on the inner surface, so that the metal is not perforated or destroyed.

The water-closets connected with the surgical wards of Bellevue Hospital were deodorized and disinfected by sprinkling in the urinals, for a number of consecutive nights a mixture of the manganate of soda and the sulphate of magnesia.

In contact with water these salts produce the *permanganate* of soda, and at little cost. The reaction is thus expressed by symbols:

$$3(\mathrm{Mn\ O_3\ Na_2O})+2(\mathrm{SO_3\ MgO}=$$
$$(\mathrm{Mn_2\ O_7\ Na_2O})+\mathrm{MnO_2}+2(\mathrm{SO_3\ Na_2O})+2(\mathrm{MgO}).$$

Permanganate Soda + Binox: Manganese + 2(Sulphate Soda)
+2(Magnesia.)

In contact with the impurities of the urinals the permanganate of soda decomposes, yielding a most active form of oxygen, nascent oxygen, or ozone, which at once deodorizes and disinfects.

This mixture has no unpleasant flavor such as characterizes carbolic acid, cresylic acid, chloride of lime, hypochlorite of soda (Labarraque's solution), and many other disinfectants. It may be constantly applied without annoying the patients of the sick room or hospital. It should be kept by the side of the urinal, and the mixed powders should be thrown into the vase or urinal each time it is used.

The liberal generation of chlorine gas has been repeated at Bellevue every few months, and with the happiest results. The most sanguine anticipations could not surpass the statement made by Dr. James R. Wood, the oldest surgeon of the hospital, that "since this thorough purification no case of pyæmia has originated in the surgical wards!"

A few years ago the Commissioners of Charities and Correction had under discussion the advisability of stripping the walls of Bellevue and relining the edifice with wood and plaster. I doubt if even this expensive procedure would have accomplished a much better result than was obtained by scraping the walls of the old New York Hospital, for the very stones were doubtless impregnated with poison.

If we ignore chemistry, the ancient Hebraic process is the only efficient one — to "break down the house, the stones of it, and the timber thereof, and all the mortar of the house, and carry them forth out of the city into an unclean place;" unless we construct our hospitals of *wood*, and burn them as occasion demands.

The latter method would effectually carry out the signification of the word *purify* — the treatment by fire.

But in a large city we need hospitals distributed within its precincts. The application of the torch might accomplish more destruction than anticipated, unless hospitals were in the outskirts of our cities. There are seventeen hospitals in different parts of Paris.

To transport patients several miles diminishes their chances of recovery, especially "accident cases."

The explosion of the Staten Island ferry-boat *Westfield* at the South Ferry, shortly after the demolition of the old New York Hospital, demonstrated the necessity of a commodious hospital in the lower part of the city. Many of the scalded and mutilated victims of this horrible accident had to be conveyed a distance of three miles to Bellevue!

From 10 a.m. until three o'clock in the afternoon the major part of the active brains of New York is in the lower extremity of our city. Accidents may occur to the rich man as well as to his hired laborer. Some of our wealthiest men have died in their down-town offices. Four years ago one of the mayors of New York died in the City Hall. Medical men of distinction were miles away. Had there been a hospital down town, physicians of experience could have been commanded instantly.

Some may reply, we have provided a few beds in the lower part of the city where the sick and injured may be temporarily cared for. But those in attendance are mostly young men, and although of undoubted ability, have not enjoyed the years of practical knowledge which might be preferred.

If a large hospital was established, say on the Battery, the most eminent surgeons and physicians of our city would be competitors for the important positions, and thus at all times, assuredly of the day, their services might be commanded. The attention of our citizens, and of the Commissioners of Charities and Corrections, should be called to consider the advisability of some such provision.

One of the members of the Board of Trustees of the New York Hospital, distinguished for his deep interest in caring for the sick, and whose liberality has recently been expressed in the erection of a surgical pavilion at Bellevue, favored me with a visit, at my office, shortly after the completion of the elegant new hospital in Fifteenth street, between Fifth and Sixth Avenues. The purpose of the visit was to solicit the details of the chemical treatment in the purification of Bellevue Hospital.

He stated that attacks had been made in the public journals upon the folly and extravagance of the Board in constructing the elaborate and expensive building, which at any time, and even within a few months, might become in part impregnated with disease, so as to be unfitted for the reception and treatment of patients; and like the north wing of the old New York Hospital in Broadway (just above the City Hall Park), would have to be abandoned, and this in the face of the views of many European and American physicians, that hospitals should be of wood, and burned every second and third year.

We feel justified in claiming, as the result of personal experience, that the ancient destructive methods may be abolished; that by resorting to the active and diffusive chemical agents, in *sufficient quantities*, not only may clothing and goods be thoroughly disinfected, but that ships, and even houses and hospitals of solid masonry, may be speedily and completely purified.

Chemistry, *heroically* employed, may save nations from the miscalled "visitations of Providence," which are really resultants of *improvidence*. ignorance and neglect. Thousands of lives may be spared; innumerable sufferings avoided; the retardation of commerce, by the forty days' delay at our ports, prevented, which involves millions of money; our dwellings and commodious hospitals kept in a fitting condition for those enjoying the blessings of health or suffering from accident or disease. —*Sanitarian*, July, 1879.

TREATMENT OF CHOREA. (J. Simon, *Gaz. Obstet.*, Sept. 5, 1879.)

The patient had been treated with syrup of iodide of iron, bromide of zinc, saline and sulphur baths. This treatment is highly rational. There is no specific for chorea. One may calm the disordered movements and prevent the accidents from increasing, but cannot arrest this affection. Cases have been seen suspended in eight days, while others, in spite of us, continue six weeks, six months, six years. They are then dependent upon a cerebral lesion. Chorea may be said to have a natural course of three months. At this time it disappears of itself. However, something must be done. The patient (5 years old) was ordered syrup of chloral, a teaspoonful three times a day, in a little syrup of chamomile, salt baths, wine of cinchona before each meal.

When the physician is called at the outset of the disease, dry cups should be applied along the spine each morning. In the way of calmants, he gives tinctures of aconite or hemlock, also tincture of colchicum as an antirheumatic. The acute stage being past, he orders tonics, posphate of lime, saline baths, gymnastics. He does not advise the seaside for excitable subjects. If one desires the vivifying effect of the sea air, it is best to keep the little patients at some distance from the shore.

MR. J. KNOWSLEY THORNTON, in a recent letter to Dr. C. T. Parkes, of this city, reports that Mr. Keith, of Edinburgh, has performed 60 ovariotomies and 5 hysterotomies, without a single fatal result.

Mr. Keith is a well-known advocate of the Lister system, and carries out its rules in detail with the most careful attention.

BOOKS AND PAMPHLETS RECEIVED.

Transactions of the College of Physicians of Philadelphia. Third series, Vol. IV. 1879. Philadelphia: Lindsay & Blakiston.

Examination of Urine, with Special Reference to the Diseases of the Urinary Apparatus. By K. B. Hoffmann and B. Ultzmann. Second edition. Translated and edited by F. Forchheimer, M.D. Illustrated. Cloth, pp. 195. Cincinnati: Peter G. Thomson.

The Multum in Parvo Reference and Dose Book. By C. H. Leonard, M.D. Cloth, pp. 97. Third edition, revised and enlarged. 1879. Detroit.

Physicians' Pocket Day-Book. By C. H. Leonard.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-first Annual Session. Baltimore, 1879.

The Grounds of a Homœopath's Faith. Three Lectures delivered at the request of Matriculates of the Department of Medicine and Surgery (old school) of the University of Michigan. By S. A. Jones, M.D.

Transactions of the New York Obstetrical Society for the Years 1876–77 and 1878, with a List of the Fellows since its foundation. Reprinted from the *American Journal of Obstetrics*, for private distribution by the Society. Vol. I. New York.

Student's Pocket Medical Lexicon, giving the Correct Pronunciation and Definition of all Words and Terms in General Use in Medicine and the Collateral Sciences, the pronunciation being plainly expressed in the American Phonetic Alphabet; with an Appendix containing a list of Poisons and their Antidotes, Abbreviations used in Prescriptions and a Metric Scale of Doses. By Elias Longley. Cloth, pp. 303. 1879. Philadelphia: Lindsay & Blakiston. Chicago: Jansen, McClurg & Co.

Treatment of Fractures of the Femur. By C. Truesdale, M.D. Reprint from Transactions of Illinois State Medical Society. 1879.

Buildings for Insane Criminals. By Walter Channing, M.D. Read at the Conference of Charities in Chicago, June, 1879.

Address delivered before the New York Auxiliary Sanitary Association. By J. H. Rauch, M.D.

Physiological Antagonism the Therapeutic Law of Cure. By Electus B. Ward, M.D. Read before the Detroit Academy of Medicine, June 10, 1879

Proceedings of the Sixth Annual Meeting of the Oregon State Medical Society, held at Portland, June 12, 13, 1879.

The Hot Springs of Arkansas as a Health Resort. By J. M. Keller, M.D. Reprint from *St. Louis Medical and Surgical Journal*, August, 1879.

Statistics of Placenta Prævia, collected from the Practice of Physicians in the State of Indiana. By Enoch W. King, M.D.

Sanitary Problems of Chicago, Past and Present. By J. H. Rauch, M.D. Reprint from Transactions of the American Public Health Association, Vol. IV.

Thirty-sixth Annual Report of the Managers of the State Lunatic Asylum, Utica, N. Y., for the year 1878.

Cleanliness, Health, Wealth. Report to New Orleans Medical and Surgical Association.

Report of the Special Committee on Medical Education, before the Illinois State Medical Society, at its Twenty-ninth Anniversary, held at Lincoln, May, 1879. Chairman of Committee, E. Ingals, M.D.

Proceedings of the Alumni Association of Rush Medical College, Chicago, 1879.

Address of Dr. C. Goodbrake, president, before the Alumni Association of Rush Medical College, Chicago, 1879. Reprint from the Proceedings of the Alumni Association of Rush Medical College, 1879.

Minutes of the Medical Society of the County of New York, 1806–1878. A. E. M. Purdy, editor. Part V.

The Administration of Chloroform. By Wm. Meacher M.D. Reprint from CHICAGO MEDICAL JOURNAL AND EXAMINER, September, 1879.

Address from the Auxiliary Sanitary Association of New Orleans to the other Cities and Towns in the Mississippi Valley.

Seventh Annual Report of the State Board of Health of Minnesota, January, 1879.

Transactions of the State Medical Society of Kansas, 1879.

Transactions of the Twenty-sixth Annual Meeting of the Medical Society of the State of North Carolina, 1879.

THE TREATMENT OF CONVULSIONS IN CHILDREN. (Ferrand. *L' Union Médicale*, Sept. 9, 1879.)

The author advises the bath, bromide of potassium internally, inhalations or chloroform, in case of extreme violence of the convulsions, anointing the axillæ with belladonna ointment. If the indications require action of the bowels, he prescribes calomel in place of the bromide, or alternating with it. In grave forms it is well to apply leeches back of the ears.

Summary.

Collaborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY.

SURGERY.

ANÆSTHETICS.—PRELIMINARY REPORT ON THE ACTION OF ANÆSTHETICS TO THE SCIENTIFIC GRANTS COMMITTEE OF THE BRITISH MEDICAL ASSOCIATION. By a Committee of Joseph Coats, M.D., William Ramsay, PH.D., J. G. McKendrick. (*British Medical Journal, Jan.* 4, 1879.)

Whilst this report is distinctly stated to be merely provisional, it shows clearly the great importance of the work which the committee has undertaken, and the results announced give us one pledge of the benefit physicians are likely to reap from their labors. The comparison of chloroform with ether has clearly demonstrated the former to be decidedly the more dangerous, acting as it does upon the heart to arrest its action, for which there seemed to be little or no relief. Their further investigations have brought to light two other substances which have given them such satisfactory results that they are reserved for complete investigation, namely, the chloride of isobutyl and bichloride of ethidene. Both of these substances produced anæsthesia as quickly as chloroform, and appear to be without its baneful influence on the heart. In experimenting, the heart was exposed so that its action could be distinctly seen. In two such experiments on dogs with the bichloride of ethidene when the anæsthetic was pushed so as intentionally to paralyze the lungs, artificial respiration being maintained, no action of the anæsthetic could be observed on the heart; when, however, chloroform was substituted for the bichloride of ethidene the right side of the heart began almost immediately to distend, get dark and its action rapidly failed. Several curious facts have been noted relative to the effect of small doses of chloroform and ether on the rapidity of nervous and mental processes. It was ascertained that a few respirations of air containing chloroform or ether produced remarkable retardation in the time of signaling back that a visional impression had been perceived, although the person operated upon was quite unconscious of the delay.

The committee has administered the bichloride of ethidene to patients six times with most satisfactory results:

1. The respiration was not disturbed, although anæsthesia was complete.
2. The pulse diminished in frequency and increased in amplitude. When the anæsthesia is complete the pulse is regular, full and compressible.
3. No paleness of the face, no blueness of the lips.

The committee proposes to study further: The action of the chloride of isobutyl on man; the action of anæsthetics on the nerve centers of respiration; the action of chloroform, ether, bichloride of ethidene and the chloride of isobutyl on the blood pressure; and the action of these various substances on protoplasm.

OBSTETRICS.

ALTERATIONS OF THE DEAD-BORN FŒTUS. M. Dénarié. (*France Médicale*, Sept. 13, 1879.)

The fœtus dead in the mother's womb is not always immediately expelled; it may remain a greater or less time in the uterine cavity, and there undergoes various modifications, described under the term maceration. Maceration is not putrefaction: the fœtus is in a closed cavity, where it has no contact with the air, which is the important element in putrefaction. Maceration is revealed by several phenomena observed in the fœtus and its annexes: placenta, cord, amniotic fluid, membranes.

1. *Fœtus.* The principal characters presented in a macerated fœtus, which permit it to be recognized from a fœtus dead after birth, are: Absence of cadaveric rigidity, softness of ligaments, epidermic desquamation, change of color in the skin and organs, and softening of the latter.

The first phenomenon which strikes us in examining a dead born fœtus is the complete *absence of cadaveric rigidity.* To be of importance, however, this phenomenon must be observed before the fœtus has undergone malaxations, or before putrefaction has set in, for rigidity disappears soon under the influence of both these causes.

Besides this absence of rigidity, which comes from muscular relaxation, great softness of the ligaments is seen, hence extreme mobility of all the articulations, and in particular of the sutures of the bones of the skull. These last, extremely mobile, give on palpation a special sensation compared to that of a bag of nuts. About these the hairy scalp becomes too large, presents folds at various points. This phenomenon may serve to diagnosticate the death of the fœtus while it is still in the uterine cavity, by means of the touch.

The epidermic desquamation is an important sign. It may be produced either spontaneously or accidentally. Spontaneous desquamation is due to the formation of phlyctenæ, produced by an exudation of serum; these break and leave the derma exposed. Accidental desquamation is that which results from friction during delivery, or from handling afterward. The degree of desquamation varies according to the length of time since the death of the fœtus. When the death is recent, it is necessary to pinch the skin strongly to produce it; when long dead, on the contrary, it is produced by the slightest contact. From this fact we may determine the probable date of death. For this the progress of desquamation should be studied upon a fœtus recently dead, macerated in a liquid for some time, making daily observations of the epidermis.

In the desquamated parts the derma, exposed to the air, takes, at the end of some hours, a bright red color, due probably to the action of the oxygen of the air upon the hematine; at the same time the surface hardens from drying.

The coloration of the fœtus furnishes very valuable signs. At the beginning a yellow coloration is observed, due to the meconium, which always escapes at the moment of death and mixes with the amniotic fluid. But after some time this coloration disappears, to give place to a rosy or uniform slate-gray coloration, due to the blood which becomes altered, loses its properties and escapes out of the blood-vessels into the tissues. The slate-gray color probably results from a transformation of the hematine of the blood. It begins in the abdominal walls, where it presents itself in spots, which give to the abdomen an appearance resembling the belly of a frog. This similitude is increased by the flat form and flaccidity due the formation of post-mortem ascites, which is produced by the transudation of blood.

Beneath the skin, the plasma spreads into the meshes of the connective tissue, and forms either a rose-colored jelly or a white lardaceous substance.

The blood is more or less completely decomposed ; the globules become raspberry-like, are destroyed, and their coloring matter mixes with the plasma, which gives it a color varying from rose to brown-red, and which, changing with time, may even approach that of leather. In the large veins, as the vena cava, large clots are found.

All the organs finish by taking a uniform tint, the result of progressive imbibition of the altered sanguinolent liquid in which they are continually bathed. This coloration, however, does not appear everywhere in the same manner; thus the liver preserves for a greater or less time its yellowish color due to the bile, and the brain its white color.

At the same time that they become colored the organs soften. The softening commences with the brain, which then appears under the form of a rose-colored pulp. The lungs and muscles preserve their solidity longest; they sink in water; but as they are susceptible of being inflated we should not conclude positively if they float that the fœtus has breathed, for the insufflation may have been produced artificially.

The eyes become soft; sometimes the white of the eye can no longer be distinguished, it having taken on a red coloration ; the cornea is lusterless and turbid. At the end of some days there is found in the ocular cavity a sanguinolent liquid which has replaced the aqueous and vitreous humor. In cases long dead the eye-ball is competely flattened.

Microsopic examination of macerated fœtuses has been made by Virchow and by Lempereur. (Thèse, Paris, 1865.) The common character of alteration of all the organs is fatty degeneration.

In the muscles, striation is recognized, between which are seen fine fatty granulations; the cells of the liver are destroyed; their place being taken by a fine granular detritus. The blood at the beginning may present raspberry-like globules, but soon only amorphous elements and fatty cells are found.

It is generally impossible to diagnosticate the cause of death from examination of the fœtus; it is sometimes found in the placenta; but often it is found neither in the fœtus nor in its annexes, for it comes from the mother or from detachment of the placenta.

The epoch of death is very difficult to determine, for we have no data. Still we may establish several periods:

In the first period, which lasts about two days, the fœtus is colored yellow by the meconium. In the second period the yellow color disappears to give place to coloration by hematine. According as this coloration is more or less uniform and more or less deep, the death is more or less ancient. In the third period the sanguine color has completely disappeared, the fœtus is entirely of a grayish white; this state comes on at the end of a month.

2. *Placenta.* It presents a uniform color resembling that of the fœtus, and displacing the normal color. Nevertheless, in the parts where the mother's blood circulates, there are still found traces of maternal circulation; the blood has not yet lost its color, and recent unaltered clots are frequently encountered, though no traces of them are found in the fœtus itself. The normal consistence disappears to give place to great friability and flaccidity. With the microscope the villosities are found much larger than in the normal state, and are infiltrated with fatty granules. This augmentation of volume of the villosities due to infiltration leads to an increase of the total volume of the placenta.

3. *The Cord.* The cord, like the placenta is more flaccid

and presents a uniform color like the fœtus, is smooth and infiltrated, flattened, and there is a disappearance of its spiral form.

4. *Amniotic Fluid.* During the first period it is colored by the meconium. At the second stage it takes on a reddish color and finally brownish, due to transudation of the blood of the fœtus through the tissues.

5. *The membranes* present the same change of color. In the first period they are strongly tinted yellow by the bile. In the second they become reddish. The amniotic fluid is the vehicle of the coloring matter. The membranes become more friable than in the normal state.

From these considerations result the following practical points:

1. When the amniotic fluid escaping from the bag of waters is colored by meconium or blood, death of the fœtus may be feared.

2. Epidermic desquamation of the fœtus is an incontestible proof of death *in utero.*

3. Débris of cord or placenta suffice to denote death before labor.

DOUBLE UTERUS WITH DOUBLE CONCEPTION. (*Gazette Obstétricale*, Sept. 5, 1879.)

Dr. Sotschawa, of Moscow, reports, in the St. Petersburg *Med. Woch.*, Jan., 1879, the case of a woman, aged 26 years, who called him on account of a hæmorrhage occurring during a third pregnancy. On examination he found two distinct vaginas, each one terminating in a uterus. The finger passed readily through the first of these, and he found an ovum presenting; the uterus seemed to correspond to about the second month of conception. The vagina of the other side (right) was narrower, but the neck could be reached, and appeared to belong to a uterus of three months. The hæmorrhage had its source in both uteri, and in consequence was considerable; an embryo of one month was extracted with the finger from the left uterus, and three days later a fœtus of three months was extracted from right uterus. The author observes that this case is not only remarkable for its rarity (only thirty cases being on record) but also because it is a proof of the possibility of superfœtation.

Obituary.

IRA HATCH, M.D.

Resolutions adopted by the Chicago Medical Society at a meeting held October 20, 1879:

WHEREAS, Our beloved friend and brother, Ira Hatch, M.D., has by death been removed from his sphere of usefulness, therefore,

Resolved, That in his death we, as a society, have sustained a loss that words are inadequate to express.

Resolved, That our deceased brother was valued by his colleagues, and by all who knew him, as a thoroughly truthful, straightforward man, a man of excellent judgment, a keen observer and successful practitioner. He has always been an active member of our society; had presented several papers containing valuable practical information; and though at an advanced age, always, to the last, retained an interest in the advancement of medical science.

Resolved, That we tender the afflicted family our sympathies in this sad hour of their bereavement.

Resolved, That the secretary furnish a copy of these resolutions to the family of the deceased. Also a copy to each of the papers of this place, and to the CHICAGO MEDICAL JOURNAL AND EXAMINER.

(Signed,) G. C. PAOLI, M.D.,
EDWIN POWELL, M.D., } *Committee.*
B. MCVICKAR, M.D.,

DR. SIBELIA F. BAKER.

The following action was taken at the meeting of the Chicago Medical Society, Oct. 20, 1879:

During the summer vacation of this society, death has claimed one of our number, whom we all delighted to honor.

Dr. Sibelia F. Baker was known to all the profession of Chicago as a lady of culture and refinement, a physician of rare ability, one wholly devoted to her profession.

In society and professional matters she was never known to shrink from performing faithfully and efficiently every duty required at her hands. Her many acts of charity to the deserving poor, and her unflinching maintenance of her position where right and wrong were involved, only served to enhance our warmest appreciation of her superior character.

While we are compelled to bow in submission to the stern decree which has removed her from our midst, we cannot abstain from expressing our deep sorrow for our own loss and tendering to her bereaved family our heartfelt sympathy in their great grief.

Let us honor her memory by emulating her virtues.

(Signed,) J. H. ETHERIDGE,
EMMA F. GASTON, } *Committee.*
D. W. GRAHAM,

Dr. Sibelia F. Baker, the subject of the above tribute, was born in Terry, Ohio, in 1841, and died in Chicago, Ills., Aug. 29th, 1879. Her school days were passed in Zanesville, Ohio, where she remained until failing health, caused by pulmonary disease, bid her seek the more invigorating air of Minnesota.

With returning strength came the resolution to devote her life to the study and practice of medicine. She was graduated from the Woman's Medical College, of Pennsylvania, at Philadelphia, in 1870, and was an honored member of the Alumnæ Association of that institution.

Having had hospital experience in New York and Philadelphia, she located in Coldwater, Michigan, where she practiced successfully four years. Removing to this city she readily gained a high standing in the profession by her skill in, and devotion to, her chosen life-work.

Last year she was honored by the Chicago Medical Society by being nominated as candidate for attending physician to Cook County Hospital. Although the county commissioners did not elect her, yet this expression of professional confidence in her ability could but be gratifying and was fully appreciated by one who richly deserved it.

Dr. Baker was a natural philanthropist, and, in a quiet way, did much to alleviate the condition of the degraded, unfortunate and suffering. She was an earnest worker in the establishment of the Woman's Christian Association Dispensary, of this city, and for two years held the position of medical superintendent in that organization.

Ever zealous in any cause which tended to elevate society, she became an active member of the Illinois Social Science Association, was one of the sanitary committee, and at the time of her death had a paper partially prepared for the annual meeting in October.

To human eyes it seems that she left much other work unfinished, and because the Heavenly Task Master has called her from earthly labor, we mourn the noble woman, the successful physician.

EMMA F. G.

DEDICATION OF THE NEW LIBRARY HALL OF THE NEW YORK ACADEMY OF MEDICINE. — On the 2nd of October, the members of the medical profession of City of New York had an experience which should interest the members of the profession in Chicago, because it will surely not be many years before Chicago sees a similar sight. The occasion was the dedication of the beautiful new Library Hall of the Academy of Medicine, upon which had been expended the sum of $12,556. Addresses were made by Dr. Fordyce Barker, the president, who presented to the Academy a beautiful marble bust of Mr. T. Spencer Wells, and also by Drs. H. W. Ackland, S. D. Gross, J. S. Billings, Prof. Shattuck, Willard Parker and Austin Flint.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Nov. 3 and 17.

West Chicago Medical Society—Mondays, Nov. 10 and 24.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.

Mercy Hospital—1:30 p. m., Surgical, by Prof. Andrews.

Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.

Woman's Medical College—2 p. m., Dermatological, by Prof. Maynard; 3 p. m., Diseases of the Chest, Prof. Ingals.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—1:30 p. m., Eye and Ear, by Prof. Jones.

Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—1:30 p. m., Medical, by Prof. Quine.

Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

Woman's Medical College—3 p. m., Surgical, by Prof. Owens.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—1:30 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.

Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.

Woman's Medical College—11 a. m., Ophthalmological, by Prof. Montgomery; 2 p. m., Gynæcological, by Prof. Fitch.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.

THE

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[In these pages dimension and weight are expressed in terms of the Metric System, and temperature in degrees of the Centigrade Scale.]

Original Lectures.

ARTICLE I.

A CLINICAL LECTURE ON TUBERCULAR LEPROSY, delivered at the Dermatological and Venereal Clinic, Rush Medical College, Sept. 29, 1878, by JAMES NEVINS HYDE. Reported by Mr. Philip Leach.

GENTLEMEN :— For the patient whom you see before you, we are indebted to Dr. M. Youngstedt, of this city, who is present and gives us the following history of the case: Peter Nanzen, age, 43 years; native of Angermanland. In this part of Sweden, there are men and women affected with a disease somewhat similar to that from which he now suffers, of whose nature he is quite ignorant. He remembers that the medical men of his native town were required to report to the proper authorities, all cases of this peculiar malady which came under their observation.

With regard to his own family history, he informs us that his father had some species of sore on the leg, the result of an injury, but that this parent survived till his 76th year. Our patient does not believe that the former was affected with the disorder from which he himself is suffering. His mother was always healthy, but one of his brothers when ten years of age, had a small brownish "spot" appear upon the surface of his body, which degenerated into an ulcer, and which subsequently required his removal to a hospital, where he died in his 22d year.

A second brother came to America, and died after exhibiting symptoms of similar character.

He states that he was married to a wife of his own nationality while residing in Sweden, and that they have had seven children born to them. The record of these is as follows:

1. Boy. Died in his 2d year, of "heart disease."
2. Boy. Died, 6th year, of "pneumonia."
3. Boy. Died, 3d month, of "croup."
4. Boy. Died, 2d year, of "croup."

These children were all born in Sweden. The following were born in America:

5. Girl. Living, in good health.
6. Girl. Living in her parents' home. She has from ten to fifteen "lumps" on her legs, similar to those which we shall observe in the case of the father. I think it proper for reasons which I will furnish later, to give her name in full, Lydia Margherita Nanzen.
7. Girl. Living in good health.

Our patient and his wife came to this country in October, 1868, eleven years ago. They first visited Omaha, but, remaining there for a short time only, settled finally upon a farm in Wahoo, Sanders county, Nebraska, where they are at present, comfortably and happily engaged in the healthful occupations of farm life.

As to his personal history, our patient informs us that he has never had a venereal disease of any kind, and that, with the single exception of a temporary illness accompanied by severe headache, with which he was seized at the time of his first coming to this country, he has always enjoyed excellent health up to the onset of his present disorder.

About five years ago, without the previous occurrence of chills, malaise or perverted sensation, he discovered a small "lump" on the superior and internal face of the right thigh, which still persists. Others followed in its near vicinity. Later, similar "lumps" appeared upon the forehead and arms. Meantime, his voice became husky, and he noticed that "lumps" similar to those upon the surface of the skin, could be seen in the throat. During the time which has elapsed since the appearance of the tubercles, he has gradually become weak. He is unable to work as much as formerly, and even locomotion is at times prostrating. His appetite is variable; his dejections, normal: the acuteness of the sense of taste and smell, somewhat diminished. He has correspondingly lost in weight. There has been an occasional feeling of numbness in the left leg with swelling of the hands, but never at any time, pricking or tingling sensations in any part of the body.

He has been under the charge of several "physicians," who have treated him for "scrofula." Under the advice of one of these gentlemen, he took the iodide of potassium for one year and a half, with scarcely appreciable effect. For the last two years, however, he informs me that he has been incapable of effecting sexual intercourse. Another "physician" removed one of the "lumps" on the forehead with the knife, but the little tumor did not fail to re-appear in precisely the same locality. Still another determined to destroy the lesions with caustic, but had no better success than had those who had experimented before him. I suppose that it is hardly necessary to state that these men all promised him relief. He is inclined to believe that when he was under the influence of arsenic, he was temporarily improved.

Let us now examine his condition for ourselves. You all see that he is a well-developed man, with an abundance of light brown hair on the scalp. Upon the surface of his forehead, we can count as many as 19 very firm, prominent, painless tubercles, varying in size from that of a pea to a walnut. There are, besides, several minute nodules in the skin of the part, which are, without question, undeveloped lesions of the same character. The largest of these is situated immediately over and partially involves the left eyebrow. It measures exactly 6 by 12 millimeters. In its center we can observe a cup-shaped shallow depression, where there has been absorption of the hyperplastic material from which the tubercle was developed. This was, possibly, an arrested process of ulceration. All the other tubercles are roundish, smooth, glistening or glabrous, brownish-red in color, and seated on what appears to be an entirely normal integument. There is no peripheral telangiectasis, but I can discover small enlarged vessels in a few of the new growths.

There is almost complete alopecia of the brows and lids, a few hairy filaments only can be seen on the upper lids. There are none whatever upon the lower lids. These few remaining filaments are short, deficient in pigment and easily removed.

In places there is slight circumscribed nodulation of the lobes of the ears, although there is here no distinct development of tubercles.

The teeth and gums are in a sound condition. Extending, however, from the middle of the hard through the soft palate, a tongue-shaped patch of split-pea-sized tubercles, its point ending in the thickened and tuberculated uvula, displays multiple lesions. These have a grayish-white depressed summit, due, as we learn, to the fact that caustic has been applied to each by the "physicians," to whose performances we have already alluded. When our patient speaks, you notice his peculiarly gruff, hoarse and discordant voice, from which it requires but little skill to conclude that the larynx is involved in the same pathological process. As we have not the requisite facilities in this room, I shall examine his vocal organs with the laryngoscope at the conclusion of this lecture, and will report to you the result.

There is a moderate degree of dyschromia to be perceived over the general surface of this man's body. Between the scapulæ, are distinct bronze-colored streaks, less marked upon the abdominal surface. The skin of the face also, is one or two shades darker than that noted usually in men of his complexion and nationality.

Extensive inguinal adenopathy exists on both sides, though the post-cervical, epitrochlear and other glands are not involved. The glands of the groins vary in size from pigeon's to hen's egg, and are painlessly involved, the overlying integument remaining unchanged.

Almost immediately over the right olecranon process, is a singular lesion. which differs markedly from the tubercles we have seen elsewhere. It is a smooth, yellowish-red plâque, looking something like a condyloma, but is very firm to the touch and quite solid in structure. It is evidently an infiltration of the entire thickness of the skin, in a circular patch measuring 5 centimeters in each diameter. and raised to the extent of about one-half a centimeter. I think that its resemblance to a slice of bacon in the skin would occur to you without suggestion of mine. The patch is generally smooth, though there are a few firmly attached scales in one portion. The history of this lesion differs from that of the others on the same arm. He states that he first had a "blister" develop in its site, which became afterward an open sore, lasting for six months. Even after this healed, it reopened and gave him further trouble.

Scattered over the extensor surface, chiefly of the fore-arm of this side. you perceive that there are seven more tubercles fairly well developed, with smaller lesions interspersed, whose number it is difficult to determine. These are reddish-brown in color and quite like those we saw upon the forehead. One, over the dorsum of the wrist, exhibits an oblong fissure in its center, covered with a light crust. The lesion is somewhat reddened, and suggests traumatism. The largest of those we find here, is of the size of a bean.

Upon the other forearm, and here also chiefly on the extensor surfaces, we find similar tubercles. eleven in number. the largest of the size of a walnut. They are quite painless to the touch, though not insensitive. On plunging a lancet to the base of one, no fluid escapes; the lesion is evidently a solid new-growth.

Upon the upper and inner face of the right thigh also, we encounter the same developments. Here too is the original tubercle. still existing in precisely the spot where he first observed the earliest symptom of his present disease, now five years ago. There has been evidently some retrograde metamorphosis here, which has, as we noted elsewhere, just stopped short of the grade of ulceration. Where the tubercle is thinned by destruction, you can see a firmly attached scale.

Upon the peroneal borders of the legs, and over the surface of the left thigh, the same lesions are distributed. One, near the left knee, is said to have originated in a "blister," which burst and subsequently discharged a "yellowish stuff" for a long period.

You will note that there is a decided bronze tint of the integument of the legs and feet. It is several shades darker than that of any other portion of the body. The peroneal surfaces of the legs also are somewhat anæsthetic. This anæsthesia, however, is ill-defined, partial, and in no instances limited to outlined areas of the skin.

Our patient complains also of a moderate degree of numbness of the feet, but tells us that he has never had pricking or other abnormal feeling in these parts, such as the "falling asleep" sensation.

(The patient was then removed from the room, at the request of the lecturer.)

Such, gentlemen, is the picture of a case, which, many of you need not be told, is one of tubercular leprosy. Some of you undoubtedly remember the patient affected with the anæsthetic form of the disease presented at this clinic last year; and in the remarks then made, the tubercular form of lepra was briefly described.*

It is somewhat singular that we are enabled to study two cases of this disease, rare in this State, in two successive years. This is the sixth leprous patient of whom I have record in this city. As to the number of those to be found in the United States, our knowledge is yearly increasing. Dr. Rohé, in 1878, estimated the total number of lepers in America at fifty. When I last spoke to you on this subject, I concluded that the number was nearly one hundred.

A record of about 74 cases was obtained by the statistical committee of the American Dermatological Association last year. Since then, Dr. L. F. Saloman has reported 14 cases observed by him in Louisiana; Dr. White, one in Boston; and I have notes of three new cases in Wisconsin and Minnesota, in addition to the three cases previously reported by me from that district, the lepers reported then being still alive. Last month, I saw a

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* See a clinical lecture on Anæsthetic Leprosy, *American Practitioner*, Feb. 1879.

Carib Indian affected with the disease, in the amphitheater of the New York hospital. To all these cases we should add the two lepers you have here seen, and a third case, of whose existence I feel very sure, in the person of the little child of the man who has just left the room. She lives in her home in Nebraska, and I have given her name to you, because I think it a matter of importance to endeavor to catalogue every one of these patients known to be living in this country. In other countries, where the disease has made greater progress, the government takes care to keep a register of all cases, but here, where we have a government which is not of the paternal order, the work is left to any man who cares to undertake it, in the interest of science and humanity, and science is always humane. In attempting to eliminate from our scheme of national government all sources of possible evil, we have neglected to endow it with certain powers which might well be exercised for the benefit of the many.

Now let us say a word as to the diagnosis of this disorder. You will remember that the macular, tubercular and anæsthetic varieties of leprosy are frequently either commingled or merely consecutive stages of one malady. We have just examined a patient exhibiting almost typical features of the tubercular variety, and, as contrasted with the equally typical features of the case of anæsthetic lepra you saw last year, you notice here the absence of a history of hyperæsthesia, the absence of large insensitive atrophic patches, of well defined relatively pigmentless areas, of crusted ulcers profoundly involving the integument, and of anæsthesia distinctly limited to certain tracts of the integument. At the same time, the intimate relationship of the two varieties will be manifest if you notice the similar features of the two cases, which are, in brief, a history of bullæ, much less noticable in the present instance, the ciliary and superciliary alopecia, the inguinal adenopathy, and the well-nigh indescribable something which attests the fact that the two men were alike victims of a constitutional cachexia of grave import.

Here again, observe the polymorphism of the disease which exhibits such a curiously ill-assorted collection of symptoms. This is one of the characteristic signs of syphilis, and we ought to stop for a moment to show that we have not syphilis here.

First, then, we have no history of syphilis in this case, though that will count for but little with us, if we find unmistakable traces of the disease elsewhere. The science of the physician, as Ricord has well said, should always be superior to the assertions of his patient. But the tubercles of syphilis are generally small, often encircled at the base with a collarette of small, fine, dirty scales, beneath which crops out the peculiar mixture of red, brown and yellow discoloration, which medical men have long since agreed to call the "copper color." Then too, syphilitic tubercles could scarcely last for five years without degenerating into ulcers, or becoming covered with the peculiar crusts of the disease. A man, too, who has syphilitic adenopathy of the groins, will rarely show such immense enlargement of the glands as you have just seen, but, should he do this, you would detect, almost certainly, engorgement of the post-cervical or epitrochlear glands, which were not affected in the case of Nanzen. Then, too, adenopathy is a symptom very rarely to be encountered in a case which has lasted for five years. We do not find either, the typical syphilitic ulcer, with its sloughy base and clean-cut edges. The arrangement and locality of the lesions are also quite characteristic, since the tubercular syphilide is apt to appear in groups, and, even when upon the face, never is so conspicuously displayed over the brows as to produce the peculiarly lion-like appearance of the forehead, from which the tubercular variety of leprosy derives one of its many names, leontiasis.

Again, in syphilitic lesions of the throat and larynx, we look rather for the opaline mucous patch in the earlier stages, and, in the later, deeply ulcerative lesions, destroying the submucous tissues or forming membranoid occlusions of the glottis. The tubercles of this throat, considered in connection with the husky voice, recall the signs of leprosy which in the middle ages were thought to be pathognomonic of the disorder.

You will also remember that in vitiligo, there are merely pigmentless areas of integument, without the slightest evidence of the constitutional impairment which is here so conspicuous, while in the disease known as morphœa, there is usually a lilac-tinted border about each infiltrated patch. The bacon-like plâque over the right elbow in Nanzen's case, is commonly seen in the tubercular forms of leprosy ; and I might add that it no way suggests the subcutaneous gummata of syphilis, as the latter are covered with a sound integument, except when in process of degeneration, which results, as a rule, in a typical syphilitic ulcer.

I will not waste your time by pointing out the difference between this disease and the "scrofula," which it was supposed to be. The best use we can make of a blunder of this sort, is to remember that the term scrofula is, more frequently than any other with which I am familiar, made to cover up ignorance, and I urge you to employ it only in those cases where you have the unmistakable evidences of what the best thought of our time has agreed to set apart from all other diseases by that single designation.

The pathological history of lepra is one of new-growth. There is, as you observe in the drawing which I now show you, in all these cases, especially around the thick-walled blood vessels and the cutaneous glands and hair follicles, an abundant development of small, round bodies, closely crowded together, which are masses of living matter, derived from the living epithelia of the normal skin, surrounded by interlacing bundles of connective tissue, not yet undergone the embryonal changes which have been so well described by the later observers. This is true not only of the tubercles, but also of the infiltrations of the surface, such as you saw on the elbow of our patient.

Tschirien has recently observed special changes in leprosy in the form of atrophy of the gray substance of the posterior cornua, and small roundish bodies accumulated in the tissue of the ependyma, with complete integrity of the white substance and the roots of the nerves.*

The questions relating to etiology and contagion, I can dismiss now as before, with a word. The etiology of leprosy is absolutely unknown, and the differences between scientific observers as to contagion, are still unreconciled. My own belief is that the disease is not contagious, and yet I confess that, when it is urged by those who do not accept this view, that the period of incubation is an extremely prolonged one, lasting, it may be, for fifteen or twenty years, we are confronted with an hypothesis, in confutation of which it is well nigh impossible to accumulate proof.

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* *Prog. Méd.*, Mar. 15, 1879, p. 203.

Certainly, if we choose to rely on the statements of our patient, we may conclude that the disease occurs in his family by heredity. There is no proof of the disease in the parental history, and he tells me that he does not know that any of his grandparents, either on the side of father or mother, suffered in a similar way. But we have tolerably distinct evidence of lepra in two of his brothers, and I need not repeat what has been said about his daughter. Heretofore I have stated that no leprous children were known to have been born to leprous parents on American soil, and, if our suspicion regarding this child be well founded, she is the single exception on record. I have made careful inquiries on this point, among the Scandinavian physicians whom I know as having experience of leprosy in the Northwest, and all these gentlemen have denied knowledge of such an occurrence. On the contrary, we know of several cases in which leprous American parents have had children who never presented traces of the parental disorder. It seems to me that the wisest course for us to pursue with regard to the question of heredity, is that described by military men as an "armed neutrality." We can not demonstrate either side of the question, and are compelled to recognize the fact that excellent grounds exist for holding to each view.

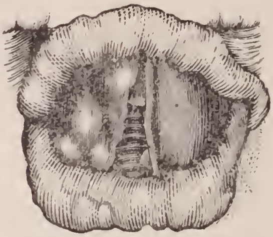
As to the prognosis, in the case of our patient, I am inclined to speak much more favorably regarding it, than in the last case brought before you. The anæsthetic patient, Brusher, was a man of dissolute habits and poverty stricken, compelled to seek relief at our public charities. Misery, as the French distinctively term these wretched social conditions, has a great deal to do with other diseases than leprosy. After the date on which you last saw him, Brusher rapidly failed in strength and health. Crops of bullæ continued to appear and burst, and leave sequelæ in atrophied and anæsthetic patches. Emaciation, much darker bronzing of the surface, and finally, chilly and febrile states to these succeeded. In the course of five months, his extreme cachexia contrasted painfully even with the deplorable state in which you first saw him.

I would make simply a less unfavorable prognosis in the case of Nanzen, although we must bear in mind that the tubercular forms of lepra prove fatal more rapidly than the anæsthetic forms. The former period is set, by Professors Bœck and Danielssen, at between eight and nine years. Our present patient is a fairly well-to-do farmer, living in a salubrious part of the country, and able to provide himself with what is really necessary for the preservation of his health. His general appearance is not nearly so unfavorable, apart from the symptoms of his disease, as was that of the poor fellow who limped into this room, nearly one year ago; and yet, curiously enough, the two men had exhibited symptoms for nearly the same length of time.

I prefer to base this favorable opinion upon the considerations named, rather than to lay undue stress upon the supposed value of the external and internal medication, which we shall adopt in the present instance. We shall instruct our patient in the matter of hygiene and food, and give him internally an emulsion of the chaulmoogra oil, which has of late been highly praised in the treatment of lepra. I ought to add, however, that some who have used it, have already pronounced against its efficacy. It is produced by expression from the seeds of the gynocardia odorata, and, according to Dr. Wyndham Cottle, can be given in doses gradually increased from 5 minims to 4 grams daily. It is best administered in emulsion, and, as it has a tendency to constipate the bowels, may require the occasional aid of a cathartic. In the form of an ointment, containing 1 gram of the oil to 4 of lard, it is also applied externally, and we shall also thus employ it in the present case. As a matter of personal experience, I will say that the oil leaves a most persistent taste in the mouth, which is somewhat disagreeable, and which therefore requires correction by some of the devices of elegant pharmacy.

On the conclusion of these remarks, a laryngoscopic examination of this patient was made by Dr. H. A. Johnson, Dr. E. F. Ingals, and the lecturer. Dr. Ingals was successful in securing an accurate drawing of the laryngoscopic appearances, which are well represented in the annexed cut. It will be seen that the tubercular development has greatly altered the intralaryngeal appearance, and that the mucous surfaces are also infiltrated and deformed by the same new growth of living matter, which has been observed on the surface of the skin. The tumefied surfaces were reddened, and the mobile parts extremely sluggish in all the movements of phonation. Five tolerably distinct tubercles are visible, projecting from the right vocal band, and one also projecting from beneath that on the left, toward its anterior border. Another tubercle is indistinctly shown, projecting from the anterior border of the trachea. In this case, also the larynx exhibits the reddish-yellow color, and the vocal cords the grayish appearance, mentioned by Dr. Elsberg.

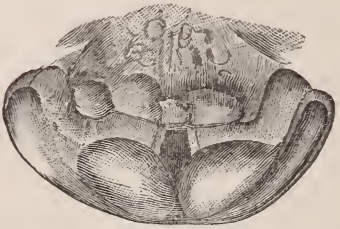
FIG. 1.



LARYNX OF LEPER IN DR. HYDE'S CLINIC.

The larynges of lepers have rarely been examined. In the *Medical Record*, of New York, for Jan. 4th, 1879, p. 10, will be found an interesting report of the throat clinic at the Charity Hospital, New York, service of Prof. Elsberg, whose observations on the larynges of two lepers, are there given. The two patients were in a more advanced stage of the disease than was the man whose case has been given above, but the general direction of

FIG. 2.

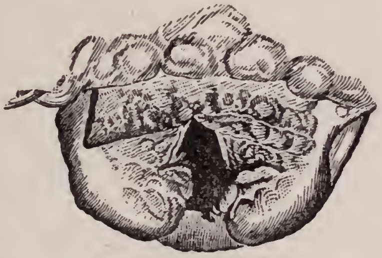


LARYNX OF LEPER. DR. ELSBERG'S FIRST CASE.

the laryngeal changes in all three cases, is remarkably the same. In the accompanying cuts, which have been kindly loaned by Dr. Elsberg to illustrate the report of this lecture, it will be seen that the tumefaction and tubercular studding of the mucous surfaces, advance to deformity from the bulging of the masses which weigh down the mobile parts of the vocal apparatus, and which are accompanied by hypersecretion, while a still more advanced stage can be recognized in greater shapelessness, increased secretion and ulceration.

According to Dr. Elsberg, these changes are preceded by dilatation of the blood vessels in the epiglottis; a peculiar reddish-yellow appearance of the interior of the larynx; gray or dirty discoloration of the vocal bands; and, later, with increased vascularization, tubercles and ulcers.

FIG. 3.



LARYNX OF LEPER. DR. ELSBERG'S SECOND CASE.

It is proper to add that in a letter from Nanzen, received by Dr. Youngstedt, one month after the commencement of treatment by the chaulmoogra oil, the patient writes that he is feeling a great deal better, and that his voice is becoming clearer, while the tubercles are decreasing in size, and the normal sensitiveness returning to the lower extremities. How much of this may be due to the encouragement derived from confidence in his physicians, remains to be determined. But an interesting confirmation of his opinion is furnished in his statement, that his leprous daughter, who is taking the same oil in one minim doses, with external inunction, exhibits an equally marked improvement, the tubercles diminishing in size upon her extremities.

Original Communications.

ARTICLE II.

SOME FURTHER THOUGHTS CONCERNING THE ORIGIN AND SPREAD OF YELLOW FEVER AND THE MEANS OF PREVENTING IT.

By N. S. DAVIS, M.D., Chicago, Ill. Read to the Evanston Philosophical Society.

During the progress of the severe epidemic of yellow fever in the summer of 1878, in the lower part of the valley of the Mississippi, I wrote an article on this subject, which was read to this society and published in the *Maryland Medical Journal* for October, 1878. In that article I endeavored to show that while we were not able, in the present state of medical knowledge, to point out the special specific cause, *materies morbi* (if such exists), which causes the disease called yellow fever, it was possible to state several of the conditions necessary for its production and propagation; and further, that at least some of these conditions are amenable to human control. I ventured also to specify some of the means for gaining such control over the production of the cause, and for limiting its spread or propagation after it had been produced. And I come now to inquire whether the re-appearance of the disease in some places on the Mississippi the past summer, and the investigations of the past year, have developed any new facts or thrown any new light upon either the origin or the means of prevention of the disease. If the questions involved in a consideration of this subject were of interest to physicians and their patients only, I would not occupy your time with it. But you are well aware that no questions bear a more direct relation to the social, industrial and commercial interests of the country than those relating to the origin and spread of severe epidemic diseases. Such diseases cannot prevail in any part of our country without causing such destruction of life, suspensions of industry and interruptions of commerce as to be felt throughout the whole land. Therefore, whatever relates to their causes, modes of propagation and means of prevention, is of interest to all classes of the community. In my former paper, to which allusion has been made, I stated the following propositions as fully sustained by the history of all previous epidemics:

"1st. The essential cause of the disease, whether animal, vegetable, or chemical, depends for its development and propagation or spread, on conditions of a strictly local character, found co-existing only within certain geographical limits.

"2d. The most important of the necessary co-existing conditions so far as ascertained, are, continuous high temperature, excess of atmospheric moisture, the presence in the atmosphere of the products of animal or vegetable decomposition, and such geographical position in relation to latitude and altitude as to secure a great predominance of the warm over the cold season of the year. The absence of any one of the first three conditions here named, positively prevents the development or spread of the disease. On that part of the northwestern coast of Africa bordering on the Atlantic and the Mediterranian, and the West India Islands where these conditions always co-exist in a prominent degree, the disease is indigenous or endemic, prevailing more or less during the warm season of almost every year; while within certain limits, both north and south of the regions just named, the cause of the disease may be either developed locally or imported from other places and spread, whenever a season occurs in which the essential conditions co-exist in an unusual degree.

"3d. As all the known conditions essential to the development and spread of the disease, pertain to the atmosphere, it is plain that the essential cause must be developed in the atmosphere and not in the living human body. Consequently if such cause spreads or becomes transferable from one place to another, it is solely by atmospheric infection and not from personal contagion. And no amount of atmospheric infection by importation or otherwise can propagate the disease or its causes, in any locality where the atmosphere does not contain the required temperature and local impurities.

"4th. The causes and conditions giving rise to the disease being exclusively of local atmospheric origin, are neither developed in nor evolved from the bodies of the sick; and, hence, the transference of any number of persons, whether sick or well, from infected places to localities where the essential atmospheric conditions do not exist, never has propagated the disease in the latter places and never can."

It will be perceived that the words atmospheric *infection* and personal *contagion* are used in the foregoing propositions, and it may prevent confusion of thought or misunderstanding, if I explain that the former relates to a poison generated outside and independent of the human body, and its propagation is wholly dependent on certain atmospheric conditions; while the latter is always generated in the living body and communicable from one individual to another by contact or near proximity without any regard to the conditions of the surrounding atmosphere. Hence the diseases produced by the infections prevail only within certain climatic and geographical limits and at certain seasons of the year, of which intermittent, remittent, and yellow fevers, and cholera are noted examples; while those arising from personal contagion prevail in any locality or climate and at any season of the year, of which small-pox, measles, scarlatina, and whooping-cough, are familiar examples.

In my former communication many facts were given from the history of former epidemics in this and other countries, sustaining more or less fully, the truth of the four propositions just stated.

Instead of repeating these, I shall simply inquire how far the facts developed in connection with the epidemics of the two past summers (1878 and 1879), sustain or disprove these same propositions. The most important items in these several propositions are contained in the first paragraph of the second general proposition, which asserts that the conditions essential for the origination and spread of yellow fever, are the co-existence of continuous high temperature, excess of atmospheric moisture, the presence in the atmosphere of the products of animal or vegetable decomposition, and such geographical position in regard to latitude and altitude as to secure a decided predominance of the warm over the cold season of the year.

During the last few months, Dr. W. Hutson Ford of St. Louis, has published the results of observations concerning the relations of temperature to the prevalence of yellow fever. He has been enabled to compare the meteorological and mortuary records of Charleston, South Carolina, through a period of thirty-eight years, and of ten other southern cities for a period of five years. Of the thirty-eight years included in the records in Charleston, seventeen were characterized by more or less prevalence of yellow fever. In six of these eighteen years the disease assumed a severe epidemic form; in six, mildly epidemic, and in five, only a few sporadic cases occurred. Only twice during the whole period did the disease prevail in decided or severe epidemic form two years in succession. In nearly all instances only sporadic or scattering cases occurred the summer succeeding a severe epidemic. The commencement of the disease was generally in August and its prevalence was limited to the months of August, September and October. On comparing the meteorological with the mortuary records for the whole period of thirty-eight years, Dr. Ford found that the years in which the yellow fever was epidemic were the same in which the summer heat rose to the highest *mean* for the three months just named in each year. The six years of severe epidemic prevalence were also the six years giving the maximum mean temperature of the summer months. The six years of slight epidemics ranked next in the mean temperature of the same months.

The five years of sporadic cases gave a mean temperature for summer and autumn less than those in which the disease was moderately epidemic. In the remaining twenty years in which there was no prevalence of the yellow fever, the mean temperature of the summer months was at the minimum; the highest of any of these years being lower than the lowest of those in which the disease prevailed. The only exception to this rule was in 1836, when the mean temperature of the months of July, August, September and October, was as high as the years of most severe epidemic prevalence of yellow fever, and in that year the city was scourged by a severe epidemic of cholera, that appeared to supercede the yellow fever. Dr. Ford has analysed and compared these statistics of Charleston in the most varied and philosophical manner, but always arriving at the same result, namely, that the seasons of yellow fever epidemics are identical with those of highest summer temperature. His comparison of meteorological and mortuary statistics in the other ten cities situated on the Gulf of Mexico and along the Mississippi river, as far north as St. Louis and Louisville, is only for a period of five years including 1874-5-6-7-8. But they lead to precisely the same conclusions.

Thus the summers of 1873-4 were a little above the average mean for a series of ten years, and there were moderate epidemics of yellow fever in several of the cities on the lower Mississippi and the Gulf. The summers of 1875-6-7 were decidedly below the mean temperature for a series of ten consecutive years, and there were no epidemics of the fever in any of the cities under consideration. The mean temperature for July, August, September and October, was the lowest in 1875, from which an annual increase was presented in 1876 and 1877, culminating in the extraordinary summer temperature of 1878, and the equally extraordinary epidemic prevalence of the the disease. The mean temperature of the summer of 1879, just closed, falls below that of 1878, yet is decidedly above the average for a series of years, especially in the middle and lower part of the Mississippi valley. And true to the law, already deduced, the yellow fever re-appeared fairly epidemic in Memphis and its vicinity, and sporadically in New Orleans and a few other places. These eminently philosophical deductions of Dr. Ford, are corroborated by a great variety of other facts; and are sufficient to show a *necessary* connection between unusual high summer temperature and the appearance of yellow fever epidemics. If the investigations related only to the years 1878 and 1879, or to any other one or two years, the co-existence of a high mean summer temperature and an epidemic prevalence of the fever might be regarded as merely accidental; but when the statistics cover a period of thirty or forty consecutive years, as in the case of Charleston, and the same co-existence is found uniform throughout, the presumption of accidental coincidence ceases, and the deduction assumes the importance of a fixed law. The same series of investigations and statistical comparisons also establish the important fact that the fever never assumes an epidemic character until the high summer temperature has progressed two months, namely, through the months of June and July; the favorite month for its epidemic ravages to commence in our country being August. And in the few instances of its commencing to prevail epidemically in July, it is found that the high summer heat had commenced in May. Such was the case in Memphis the past summer. In the temperate zone the sun reaches a position relative to the earth which gives to its rays most directness and power to impart the greatest amount of heat to the earth's surface, about the 21st of June. At the same time, the days become the longest compared with the nights, and consequently, more heat is absorbed each day by the earth than is radiated into the air during the night; and hence there is a steadily increasing temperature of the earth's surface through June, July and August, while that of the atmosphere may be much more fluctuating. Often times, even here in Chicago, the mercury rises higher for a few hours in the middle of some days in the third week in June, than in any other days of the year, but the nights are yet cool, and no visible disturbances of health result from such temporary high temperature. So also many instances have occurred where ships having yellow fever on board have arrived in New Orleans and other Gulf or Atlantic ports, during the months of May and June, and even here and there a sporadic case has occurred in those cities independent of any known importation, during those months, yet no general or epidemic development has appeared, until the latter part of July or in August, and in many instances, not until early in September. These facts show that it is not merely high temperature, but such temperature continued until the surface of the earth reaches a degree of heat and moisture most favorable for rapid decomposition of organic matter, and the suspension of the products of such decomposition with aqueous vapor in the atmosphere, that we get the exact meteorological condition *necessary* for originating or sustaining an epidemic of yellow fever. But even when the temperature is sufficiently high and long continued, with a moisture most favorable for fermentation or decomposition of organic matter, yet no epidemic yellow fever will be developed unless the particular kind of organic matter required be present to undergo such change, in sufficient quantity to impregnate the atmosphere to a considerable extent. Just what the deleterious material is, that is engendered and diffused in the atmosphere as the pabulum for supporting yellow fever, is not yet known. Neither is it fully known as to what kind of fermentive or decomposible organic matter is necessary to furnish the pabulum on which the heat and moisture is to act. Yet all the facts connected with the origin and progress of the yellow fever during the last two summers, point unmistakably to local atmospheric and topographical conditions as exerting a controlling influence over the spread or continuance of the disease, whether its supposed essential cause was imported or not. For instance, in the summer of 1878, the disease assumed an epidemic form in New Orleans during the month of July, and prevailed nearly a month before any cases were recognized in Memphis, although there was constant communication between the two cities both by river and railroad. And at a still later period the disease made its appearance in many smaller places, more or less distant from each other, so nearly simultaneously as to preclude the possibility that it had been communicated from one to another.

Again, in the present year, as is well known, the disease commenced in Memphis, and prevailed severely before it had appeared in New Orleans, or any other place bordering on the Gulf. More than half the population speedily abandoned the city, scattering themselves widely over the more northern parts of the country; many hundred more went into camps on well chosen ground only twenty or thirty miles distant from the city; while the local board of health, aided by the State and national health organizations, not only established and enforced the most rigid quarantine, but waged an unceasing warfare upon the disease in the city by isolation and disinfection, using almost unlimited quantities of the best antiseptic and disinfecting remedies known; and yet the epidemic continued the even tenor of its way in the city, and after five weeks made its appearance in a score or more of smaller places in different directions from Memphis. But the moment a severe frost made its appearance, reducing the temperature of the atmosphere a little below 0° C., or 32° F., the disease, which for nearly three months had bid defiance to hundreds of tons of disinfectants and any number of quarantines, even when aided by shot-guns, disappeared as if by magic. If we put the facts recently developed in regard to the necessary influence of continuous high temperature in originating an epidemic of yellow fever, with the long known fact that a *low* temperature invariably extinguishes it, we have proof amounting to demonstration that the propositions already stated in relation to the several conditions that *must co-exist* in any given locality to allow the development of an epidemic of this disease, are correct.

In relation to the most efficient means of preventing the development and spread of yellow fever, I stated in my former communication, "that the first and most important of all the measures for preventing the development of yellow fever in any given place, either locally or by importation, are such as will remove one or more of the conditions necessary for the production or spread of the disease. Of these conditions, the one most readily under human control is the contamination of the atmosphere from local sources of vegetable and animal decomposition. It is well known that the chief sources of such decomposition are imperfect and uncleanly sewers or cess-pools, foul and stagnant water, and low, moist ground, rich in vegetable matter.

"To remove these sources of atmospheric impurity early in each year, and keep them thoroughly removed until the close of the warm season, and thereby prevent the supply of local material on which the essential cause of yellow fever depends for its propagation, is the *only reliable* safeguard against the development of this disease in any place within the geographical range of its prevalence. If this is neglected until the atmosphere of any locality becomes filled with miasms as a pabulum for the fever poison, and the summer temperature prove continuously high, the disease will prevail and spread in defiance of all the inland quarantines that can be devised. But if a sufficient degree of cleanliness in regard to streets, alleys, gutters, sewers and stagnant waters, to prevent the atmosphere from becoming filled with the products of decomposition and impurities, is accomplished early in the season and faithfully maintained until the frosts of autumn, there will be no danger of the prevalence of yellow fever, either by importation or otherwise. The point of vital importance is to *prevent* the development of the noxious material that constitutes the pabulum on which the essential cause of the disease feeds or out of which it originates.

The second series of preventive measures of great importance is suggested by the third and fourth propositions stated above, and are as follows:

"1st. The municipal and health authorities of every important city or town on the coast of the Gulf, from the Mexican boundary to Charleston on the Atlantic; on the Mississippi from New Orleans to St. Louis; on the Red River below Shreveport; on the Ohio below Pittsburgh; and on the principal lines of railroad in immediate connection with such cities and towns, should deliberately select the nearest unoccupied, dry, elevated place, containing pure air and good water, and as readily accessible as possible, to which all families willing to go could be speedily removed from an infected street or section of a town or city, and accommodated in tents or other temporary structures until they could safely return to their homes.

"Wherever this principle of speedy removal was acted upon by our army, it proved entirely successful in stopping the spread of the disease among the soldiers, and its imperfect and limited adoption at Memphis the present season has been of great value.

"If the proper places were carefully selected beforehand, and a supply of tents or other material kept under the control of the proper authorities, so that on the first appearance of the disease in a neighborhood those exposed could be removed without delay, and ordinary supplies of provisions for the poor dealt out *only* at the camp or camps, there would be but little difficulty in limiting the local spread and fatality of any epidemic. While such camps would chiefly operate for the benefit of the poorer classes (and wherever it should be possible to find the proper grounds on railroad lines within a radius of from ten to twenty miles of the city, many of the workingmen could go in every morning and continue many kinds of work), all who were able to provide for themselves and their families away from home and were not thoroughly acclimated, should be encouraged to go early and freely, the only condition imposed being that they should not stop until they had passed entirely north of the climatic zone of the yellow fever. The only internal or inland quarantine regulations required are the selection of suitable and well prepared healthy stations a few miles from each of the more important cities on the great lines of travel, whether by river or railroad, where boats and trains shall halt long enough for inspection, and if any are found sick of the fever they shall be transferred directly to the station and cared for, the boat or car being thoroughly ventilated, and allowed to proceed with all the well persons, to any proper northern destination. The great northwestern region bounded on the east by Waukesha, Mackinac and Marquette, extending indefinitely westward over the northern peninsula of Michigan, northern Wisconsin and Minnesota; and the whole Alleghany range in the northeast, from Virginia to the Adirondacks, are sufficient to accommodate every unacclimated person in the lower Mississippi Valley and in our southern seaport cities; and they could no more spread the yellow fever in those regions than intermittent fever could be spread on Mount Washington.

"2d. The same principles apply to commerce and business. There is no positive evidence whatever, that the disease is ever transmitted by simple contact with the sick, nor by either articles of clothing or merchandise that have been freely exposed to the air outside of an infected locality. It is only when the *infected air* of the locality where the disease is prevailing, is shut up in the hold or apartments of a ship, boat or car, or boxed up with goods in boxes or trunks that it can be carried to distant places and retain its active properties. And even when so carried, it must be let out in an atmosphere in the new locality at the proper high temperature and containing the necessary local miasms or impurities, or it becomes utterly harmless. All that is necessary, therefore, is to have all ships, boats, and cars, carrying freight, stopped at suitable places outside of populous towns, inspected, all parts thoroughly ventilated and cleansed; and where goods had been packed in bales, boxes, or trunks, the same opened and aired before they are received by the parties to whom they are consigned. If the municipal and health officers throughout the Mississippi Valley had been prepared, at the first beginning of the present epidemic in New Orleans, to have acted promptly in accordance with the foregoing suggestions, and their action been cordially sanctioned by the people of the North, how vastly different would have been the result. Instead of throwing every possible obstacle in the way of the escape of the unacclimated and timid from the infected city or cities; stopping commerce and business, and consequently supplies; throwing laborers out of every kind of employment, thereby adding to the dread of pestilence, the still more destructive horrors of famine, idleness, and isolation from the rest of the world; tens of thousands of those who have been compelled to remain, substantially imprisoned within the infected regions, or to overcrowd the few places, like Nashville, Holly Springs, Louisville, and to a less degree, Cincinnati and St. Louis, near the borders of the climatic yellow fever zone, would have been enjoying health and vigor in the regions indicated in the north; other thousands of the poor would have been in healthy encampments, where their wants could have been easily and regularly supplied; the business of the country would have proceeded in its ordinary channels, and the lives of at least one-half of those who have fallen victims to the pestilence would have been saved."

It must be remembered that these suggestions in regard to preventive measures were written while the epidemic of 1878 was in its most active stage of progress. It is now a matter of interest to enquire whether anything has since transpired, calculated to either sustain or disprove their correctness. In regard to preventing the atmosphere from becoming impregnated with the products from decomposition of vegetable and animal matter, by efficient drainage, strict cleanliness, and the proper use of disinfectants all the year, but especially during the three months preceding the climax of summer heat, not enough has been done to afford a fair test of its value. The proposition that, on the appearance of an epidemic in any given place, all persons not being fully acclimated or protected by previous attacks of the disease, should be encouraged to immediately remove to healthy districts; such as were pecuniarily able to go beyond the yellow-fever zone, and those who were not able, to go into well-selected camps in the vicinity, was subjected to a pretty fair test in Memphis the past summer.

On the outbreak of the epidemic the utmost facilities were afforded for all who wished to go to the North, and three camps were established in judiciously selected localities within twenty or thirty miles of the city, in which many hundreds of the poorer classes took refuge. The result was most gratifying. Those in the camps remained perfectly free from the disease; only a very few of those who fled to the North were taken sick after their departure, and yet the population left in the city was reduced to ten or twelve thousand, and the aggregate number of deaths from the fever during the whole season was only about 550, instead of 2,500 during the epidemic of 1878.

The suggestion to carefully select stations in proper places along the lines of travel and commerce, both by rivers and railroads, at which boats or cars from infected places should be stopped for inspection, and, when necessary, thoroughly ventilated and cleansed, with the removal of any found sick to a hospital for proper care, while the well were allowed to proceed on their way, thereby substituting systematic inspection, with enforcement of ventilation, cleanliness, and care of the sick, in the place of quarantines, has been tested only to a limited extent. A station of this kind was established the past summer at Island No. 1, below Cairo, and in a less perfect manner on the Ohio, below Louisville and Cincinnati. The quarantine station, fourteen miles below St. Louis, was also managed partly on the same plan. The results at each of these places has been most beneficial, and fully demonstrates that if the plan of establishing *inspection stations*, with temporary hospital accommodations attached, was carried out in the systematic manner I have suggested, it would afford a far better protection against the spread of the disease from one place to another than the ordinary methods of quarantine, even if aided by shot-guns, and yet neither destroy commerce nor interrupt labor.

The question is often asked whether there is any danger of yellow fever in Chicago? We may confidently answer this question in the negative, if there is such necessary connection between continuous high temperature and the prevalence of the disease as indicated by the foregoing meteorological facts. So far as yet ascertained, the fever has not occurred in any place in the Southern States as an epidemic, however mild, until after at least two months of *mean* summer heat, ranging from 21.3° C. to 26.8° C., continuing at 26.8° C., or above, for August and September, and from 24.1° C. to 26.8° C. for October.

It is well known that we have no seasons of such protracted high heat here. For instance the temperature of the past summer (1879) was above the average for a series of years; yet the mean temperature for July was only 24.6° C.; that of August 22.7° C.; September, 16.1° C., and October, 16.6° C. It may be proper to remark that the mean temperature of the last named month was at least 2.7° C. above the usual average mean for October. But, while the temperature of our summers is too low to favor the prevalence of yellow fever, it would be a great mistake to suppose that it was not sufficient to produce a great effect on the prevalence and mortality of some other diseases. On the contrary, the sudden accession of continuous high heat in July, as compared with May and June, uniformly induces a rapid development of bowel affections, as diarrhœa, cholera morbus, and cholera infantum, which prove fatal to large numbers of children under three years of age. Indeed, a larger number of children under three years of age died in the city of Chicago during the months of July and August, 1879, than have died of yellow fever during the whole of the same year in all the Southern States. And the unusual high mean temperature of the past October was accompanied by 112 more deaths in this city than during the corresponding month in 1878, the mean temperature of which was about 5° C. lower. It is thus seen that meteorological conditions exert an important, if not controlling, influence over the prevalence of ordinary endemic, as well as over extraordinary epidemic diseases.

Article III.

Diffuse Multiple Capillary Fat Embolism of the Lungs and Brain as a Fatal Complication in Common Fractures, illustrated by a Case.

By Dr. Chr. Fenger and Dr. J. H. Salisbury. A paper read before the Chicago Medical Society, Nov. 17th, 1879.

In calling your attention to the above-named serious but very rare disease, we shall first quote the history and post-mortem examination of a case observed last summer in Dr. E. W. Lee's surgical ward in Cook County Hospital, and afterwards make some general remarks on the main features of the subject.

History.—The patient, Mrs. B., a housewife aged 45, and a native of Ireland, was admitted to Cook County Hospital, July 25th, 1879.

On admission, the patient stated that she had fallen from the roof of a kitchen to the ground, a distance of 3 meters, striking upon her left side. On examination, evidences of a fracture of the upper part of the shaft of the left femur were found.

The leg was placed in a comfortable position, but no permanent dressing was applied. Morphia was given *pro re nata.*

July 26th.—The patient was very restless, but did not complain of much pain.

July 27th.—In the morning the patient seemed to be sleeping quietly, but the respirations were quite rapid; 1 p.m., the patient was still unconscious; she could be roused somewhat, but did not become conscious; the pupils responded to light; 5 p.m., she had some slight spasms; the jaws were firmly set for a few minutes; 7 p.m., pulse 112, somewhat weak; temperature 38.5 (101¼ F.); respirations, 40 per minute, regular. The patient was still comatose, face pale, lips slightly bluish. The movements of the thorax were natural. Upon percussion, the dullness of heart, liver and spleen was found to be within the regular boundaries. Auscultation showed the sounds of the heart to be normal. Over the lungs the normal vesicular breathing was heard. No râles were heard, either with inspiration or expiration. The posterior parts of the lungs were also natural. The abdomen was natural. The pupils responded to light, and were equal in size. There was no local paralysis in any part of the body. The urine contained no albumen.

July 28th. — The symptoms were about the same, except that all over the lungs were heard the coarse râles which usually occur in the agony.

Dr. Fenger saw her, and made the diagnosis of diffuse multiple capillary fat embolism of the lungs. Prognosis, fatal.

She died in the afternoon of July 28th.

Dr. Salisbury noticed about the patient an indescribable sweetish odor.

Autopsy. — To the coroner, General Mann, we owe our thanks for his kindness, which enabled us to hold the exceedingly interesting post-mortem. There were present General Mann, Drs. McWilliams, Merriman and Lee, of the hospital staff, besides the internes of the hospital.

The autopsy was made twenty hours after death. The rigor mortis was well marked. The subcutaneous adipose tissue was abundant. The striated muscles appeared natural. In the pericardium was found about 15 cubic centimeters of thin yellow fluid. The heart was natural in shape and size, but flabby. The valves and endocardium were natural. The heart muscle was somewhat grayish. The heart and large vessels contained dark fluid blood, as in strangulation. Small drops of fat were found swimming on the blood. Some old adhesions existed in the left pleural cavity. Nothing abnormal was found in the pleura costalis, nor in the pleura pulmonalis. In the subpleural tissue were many small ecchymoses, up to the size of a pin's head.

Left Lung. — The surface of the whole lung had a peculiar red, spotted appearance, which was most marked in the anterior parts of the lobes. The cut surface of the lung presented the same appearance. Some parts were quite white, which was due partly to anæmia, but chiefly to emphysema along the anterior borders.

The posterior part of both lungs was congested and somewhat œdematous. There was no capillary bronchitis. The bronchial mucous membrane was somewhat injected, but there were no ecchymoses and no mucus except in the largest tubes.

In one place, at the base of the lower lobe of the right lung, were some larger ecchymoses. One was as large as a lobule, M. .008 in diameter. These ecchymoses were mostly subpleural. The cranium was rather thick, but otherwise natural. The dura mater was natural. The lateral ventricles contained a little clear serous fluid. The brain tissue of the hemispheres was natural, and not particularly anæmic. On the cut surface of the hemispheres, especially in the white substance, were found numerous ecchymoses, appearing as small, round, dark, blood-red points, varying in size from points scarcely visible up to 1 millimeter in diameter. These were found all through the white substance, and a few were found in the gray. The same spots were found in the cerebellum, and a group of them in the anterior part of the pons varolii, and some in the corpus callosum. The vessels at the base of the brain were natural. The substance of the large ganglions was natural.

No fluid was found in the abdominal cavity. The peritoneum was natural. The spleen was of natural shape and size, but on the surface were seen several small, dark irregularly shaped spots 4 millimeters in diameter, which seemed to be superficial hæmorrhages.

The liver was grayish and anæmic, but there were no ecchymoses. The kidney was of natural shape and size, flabby, but otherwise normal. The uterus and bladder were normal. In the fundus of the stomach were small ecchymoses in a limited space of 2.5 Cm. in diameter. Otherwise the mucous membrane of the intestines was normal. In the upper part of the left femur between the 1st. and 2nd. third, was a complete transverse fracture, surrounded by the usual amount of coagulated blood, filling the surrounding inter-muscular spaces. The substance of the fractured bone was normal. The marrow in the canal of the shaft was yellow from infiltration with fat, as we usually find it in elderly persons. No traces of inflammation were seen in or around the fracture. There were no coagula in the larger of the surrounding veins. The femoral vein contained dark fluid blood with no visible fat drops in it.

Microscopical examination showed the following interesting features:

Small pieces cut off with the scissors from the surface of the lung showed the smaller arteries and some of the capillaries of the pleural tissue as a whitish-yellow refracting net-work, owing to the injection and filling up of those vessels with liquid fat. Sections from the interior of the lung tissue showed a fine, more or less complete injection of liquid fat, in the net-work of capillaries surrounding and protruding into the air cells.

The following sketches will show the above mentioned features:

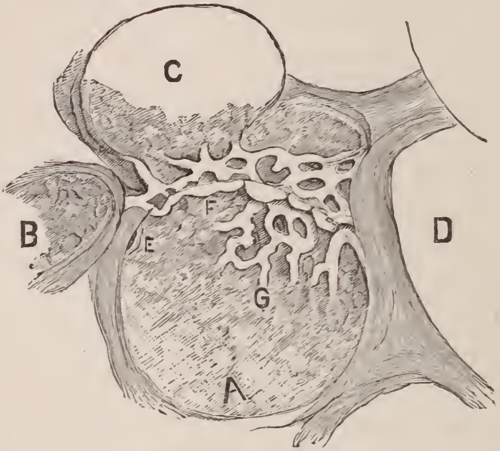


FIG. I.

Figure I, shows one complete air cell, *a*, and three incomplete ones, *b*, *c*, *d*. In the interstitial tissue, between these four air cells, you see besides the usual characteristic elastic fibers, a light net-work of injected capillaries, a loop of which protrudes at *e* and *f* in high relief from the internal wall of the air cell; at *g*, part of the net-work of capillaries at the bottom of the air cell is visible, on account of the injection with fat.

Fig. II shows an almost complete injection of the capillary net-work at the bottom of the air-cell *a*. In the interior of this net-work we find the homogeneous aspect of the fat, interrupted by small, round, granular bodies of the size of a white blood corpuscle. The above mentioned small bodies may be either white blood corpuscles still clinging to the wall of the capillary afte the oily fat has set in, or leucocytes brought up with the fat from the marrow where they are usually found in great numbers.

The specimens we hereby show in the microscope do not exhibit the above described condition so distinctly now, because the fat, in the course of the elapsed three months has, in most places, run out from the cut branches of the capillaries and shows itself now as round, refracting, fat drops scattered all over in the tissues. Still, the capillary injection is visible in some places and the filling up of the smaller arteries with fat can be easily enough recognized—as shown in the microscope with the low power. In another microscope we show a section of the lung tissue with empty capillaries only to call attention to the fact that here the capillaries are not visible at all, and, unless the capillaries are filled with blood or some colored artificial injecting fluid, we will not be able to see a trace of them. The microscopical examination of the small hæmorrhages in the brain tissue, showed the sub-capillary arteries in the center of the hæmorrhage filled with fat in the same manner as in the lungs. In none of the other organs of the body were we able to discover any fat in the smaller vessels.

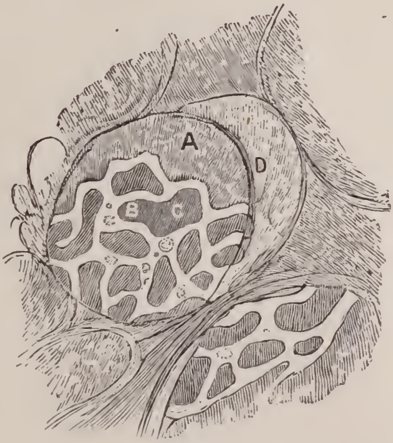


FIG. II.

Upon adding osmic acid in the sections of lung tissue, the fat in the vessels is colored black and the vessels then appear as if they were filled with some black injecting fluid. This renders the demonstration of the presence of fat much easier than by the examination of unstained specimens.

We are indebted to the kindness of Dr. Merriman for part of the literature concerning this subject, viz: the *Medical Record*, of New York, July 19th, 1879, where two fatal cases of fatty embolism in fractures are briefly stated.

As far as we remember, the first observation was made in Germany, in 1862, by the renowned pathologist, Prof. Trenker. Attention once called to the danger of liquid fat from the marrow of fractured bones gaining access to the veins and causing obstruction of the lung capillaries, numerous examinations were made of the lung tissue, in occasional deaths after fractures and other lesions, and it was found (Orth *) that fat embolism in the lungs occurs in almost every case of extensive fracture of the bones. It is however in only a very small number of fractures that the amount of fat entering the circulation is considerable enough to prove fatal, or even to give recognizable disturbances in the course of common uncomplicated fractures.

Further investigations by Flournoy and V. Recklinghausen in the necropsy theater at Strasbourg, showed that slight diffuse fatty embolism could be found in 10 per cent. of a series of 260 dead bodies. Up to 1879, Egli Sinclair † had gathered records of 140 reported cases, and he found the etiology to be limited to one of the following three morbid conditions: 1. Extensive contusion or laceration of soft parts, containing abundance of adipose tissue. 2. Fracture, with extensive lesion of the marrow of the bones, and, 3. Osteomyelitis — chronic as well as acute inflammation of the marrow of the bones.

The most severe cases of fatty embolism however set in after fractures; *e. g.* In 140 cases, death ensued in 18; that is, 13 per cent. Of these 18 deaths, 16 occurred in the 84 cases of fracture.

Symptoms and Diagnosis. — The symptoms, as Egli Sinclair gives them, from cases of fatty embolism in extensive fractures, are as follows: Unexpected, rapidly increasing, general debility; then the symptoms from insufficience or entire absence of oxidation of the blood; respirations from 40 to 60 in the minute; pulse weak and frequent; temperature often somewhat augmented. Râles in the larger bronchi, and finally in the trachea (præmortal). Dyspnœa sometimes to the highest degree; then reddish foam coming out of the mouth. The face grows pale, later cyanotic; the extremities get cold, pupils contracted. The patient becomes somnolent, finally comatose, and death ensues, sometimes preceded by vomiting and spasms.

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*Orth, Diagnosis in Pathological Anatomy. Translated by Shattuck. New York, 1878. P. 160.

†Egli Sinclair, Ueber Fettembolie. Correspondenzblatt fur Schweizer Aerzte V. 6, 1879. St. Petersburg *Med. Wochenschrift*, N. 23, 1879; *Allgemeine Medicinisch Central-Zeitung*, Berlin, 2 Juli, 1879, p. 683.

The diagnosis in the case which we have related was based on the following reasoning:

We had before us a previously healthy person with a simple, uncomplicated fracture of the femur, that from the beginning promised to run the usual benign course towards healing. The second day, except some restlesness, there was nothing to indicate the approaching danger. The third morning she was found in a comatose condition, which had set in without any previous suffering sufficient to waken her from her sleep, which means that the grave symptoms, as usual in these cases, set in suddenly. Besides this comatose condition, we find no fever of any account. A temperature of 101¼° is the usual aseptic and innocent rise in temperature that will be found (R. Volkman, in 11 out of 14*) in most of the fractures of the femur not treated with immovable dressings. The physical examination does not show any morbid symptom in the organs of the thorax and the abdomen. The urine shows that there is no disease of the kidneys and no diabetes. As to the brain, we find no symptoms of a local disease. There is no paralysis, equal pupils and no symptoms of pressure, such as stertorous breathing, etc.

The only positive symptoms able to lead attention in the direction of the seat of serious trouble, were the cyanosis, paleness of the face, bluish hue of the lips and the augmented number of respirations—40. These symptoms evidently pointed to the lungs. As now the air-cells as well as the bronchi were normal, we must place the trouble in the circulatory system of the lungs, thrombosis or embolism in a great part of the pulmonary vessels.

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* I. Volkman, Samlung Klinischer Vortrage, p. 1023. Ueber Septisches und Eseptisches Wundfieber.

A spontaneous thrombosis in the trunk and branches of the pulmonary artery can take place in endarteritis of this artery. But this disease is as seldom found here as endocarditis in the right heart. Embolism could occur from a loosened thrombus in any part of the venous system from the right ventricle or auricle but here was no previous heart disease and no previous exhausting febrile disease.

The only peripheral diseased place to be found was this recently fractured femur. Around a fracture, thrombosis in the larger veins is not uncommonly found (F. Durodié *). The thrombi from the smaller veins formed round every fracture extending out into larger and larger veins, causing probably part of the œdema accompanying so many fractures of the extremeties. Loosening of part of these thrombi and subsequent embolism of the lungs is rare but takes place in one case out of three hundred (Durodié). A sufficiently large aseptic embolus in both of the main branches of the pulmonary artery might give a similar series of symptoms ending in death. But the formation of these peripheral venous thrombi and their subsequent detachment and entrance into the circulation take a much longer time than 48 hours, and consequently we were obliged to abandon this explanation of the symptoms. Finally there was left no other diagnosis that would correspond to the symptoms of the case than the fatty embolism of the lung capillaries, i. e. the introduction into the circulation of liquid fat in sufficient quantity to make the greater part of the lung capillaries impassible for the blood. The moderate acceleration of the pulse and the not extreme cyanosis are easily explained by the difficult passage of the blood through the lungs from the venous system over-filled with blood. The weakness of the radial pulsation is a natural consequence of the diminished quantity of blood in the arterial system. The comatose condition may be explained by the want of blood supply to the brain and the medulla oblongata (Wagner †) probably combined with accumulation of carbonic acid in the blood. Whether

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* F. Durodié Etude sur les thromboses et l'embolie veineuses dans les contusions et les fractures. Thèse, Paris, 1874.

† Wagner, Manual of General Pathologie. Translated by Van Duin; New York; 1876; p. 209.

the multiple capillary embolism in the brain in our case contributed to the depression of the cerebral functions or not, cannot be decided.

In a number of the reported cases of this kind the fatty embolism has caused sudden death. (Wagner, loc. cit).

In one of Déjerine's cases death occurred in two and one-half hours, in the other, thirty-six hours after the fracture was received. The report of his cases does not give any information about the duration of the grave symptoms. About this we cannot tell anything for want of the original reports of previous cases. Our case, though fatal, did not take a very rapid course, which was so far interesting, as it gave sufficient time (the grave symptoms lasted over thirty-six hours) to have the diagnosis based upon a minute examination of the symptoms.

Prognosis. — The prognosis depends upon the quantity of the circulating fat, and upon the strength of the heart's action. If the right ventricle can get and keep up power enough to push the fat through the lungs, then the immediate danger will be overcome. An extensive fracture, as the source of the embolism, will make the prognosis worse 20 to 40 per cent. than lacerated soft tissues or osteomyelitis.

Treatment. — The natural treatment will be to stimulate the action of the heart in the hope that an increased *vis a tergo* can drive part of the fat through the lung capillaries, out into the aortic system (digitalis, alcoholics, etc). When the immediate danger from the pulmonary system can be overcome, then the organism will gain time to get rid of the fat, presumably by transforming it into soluble soaps through the action of the alkalies in the blood. Merely hypothetically, we should advise to keep the fractured bone or the diseased part scrupulously immovable, with the view of preventing any more liquid fat from escaping from the tissues. As to this point, we must remember that in the marrow as well as in the adipose tissue, the fat is contained in so-called fat-cells, i. e. membranous sacs. These membranes must be destroyed or torn open before their contents of liquid fat can gather in a fluid, movable mass; and it is in this condition of the fat that the danger lies, as we do not find the fat-cells or sacs but only their contents in the capillaries of the lungs.

ARTICLE IV.

ANOMALOUS COMPLICATIONS OF UTERINE FIBROIDS. By J. T. EVERETT, A.M., M.D.

In a careful examination of the literature on uterine fibroids, there are but few references to any complications whatever. Of the few who have noticed these concomitants, sarcoma and mucous polypi seem to be most frequently mentioned by Schroeder, Nélaton and others. But our standard authors appear to ignore the connection between these troubles, or their relation, treating of each under a separate head and never referring to their synchronous appearance. Various writers have simply mentioned these complications *en passant;* but do not go into details, or dwell upon their treatment or effects. Whether these complications have proved of such small importance in their hands, or whether they are of such rare occurrence as to be seldom seen, I am unable to say. But in my hands they have entailed such sad and grave results as to be long remembered; and have occurred with such frequency as to keep the mind on the *qui vive.* Writers of our text-books may perhaps be excused from mentioning these complications *in extenso*, on the ground of economy of space and to avoid repetition, each being treated of separately under its appropriate head. But the writers of clinical cases should not omit to mention these whenever met with in their operations. The treatment of these troubles when accompanying or following fibroids is a very different matter from their treatment when occurring idiopathically. In 19 cases where I have operated for the radical removal of uterine fibroids, I have met 3 cases of mucous polypi, 4 cases of sarcomatous degeneration of the mucous membrane, and 3 where the fibroid tumor underwent retrogressive metamorphosis. Perhaps as terse and full a treatise upon this subject as in any language, is the paper by Guperon, in Billroth's "Hand-buch der Frauenkrankheiten," Stuttgart, Enke, 1878.

Schroeder, in Ziemssen's Cyclopædia of the Practice of Medicine, Vol. X. pp. 222–228, gives a very full description of the normal fibroid, and cursorily mentions, softening, induration, sarcomatisation and calcification. It is known that the process of softening and disintegration takes place by three kinds of action. 1st. By simple *œdema* thus producing atrophy of the muscular structure when normal absorption takes place. 2d. By fatty metamorphosis, where the muscular fibers undergo fatty degeneration, changing to fat globules, and these in turn being dissolved and absorbed. And 3d. By the myxomatous degeneration, where a large quantity of mucous tissue is formed among the fibers, its pressure causing atrophy of the fibers and absorption thus supervening. The indurative process is quite similar in many respects to the fatty metamorphosis. An interstitial inflammation takes place from some occult cause, and the muscular fibers degenerate into fibrinous bands, which by their contractions cause the atrophy and absorption of all softer material and the tumor assumes a hard cartilaginous appearance and ceases to grow. Of its sarcomatous degeneration, we have two modifications, one attacking the fibroid proper, the other involving the uterine tissues as well. In either case, the process seems to be the same. Round cells begin to proliferate between the bundles of muscular fibers. These continue to grow and encroach upon the surrounding tissue and gradually cause its absorption.

In my own practice of 19 operations for the removal of uterine fibroids, I have met 7 cases of sarcomatous degenerations, two of which underwent a second retrogressive transformation and finally terminated in carcinoma, and one terminated in calcification.

The conclusions of Guperon are so very pertinent to this case that I may be excused for translating the article *verbatim:*

He says: "In general it can be affirmed that the uterine fibroid is of very slow growth; the more these consist of cellular tissue, the slower the progress and the closer their nature to true fibrous tissue.

"The muscular tumor, or the true myome, grows much faster; it has been observed that these grow at times with astonishing rapidity; this is peculiarly the case during pregnancy. Aside from this, the sudden voluminous swelling does not occur through rapid growth as many have stated, by enlargement, accumulation of the proper elements, but through the change in the blood accumulation, through œdema or other pathological phenomena such as inflammation. The size of the interstitial fibroid changes, especially before or after menstruation; here occurs the most striking difference, and in not a few instances has the apparent decline after the close of menstruation been mistaken for a retrogressive inflammation. Similar occurrences are readily observed in pedunculated fibroids which are extruded from the mouth of the womb, by which the pedicle is held, thereby causing swelling of the tumor through the retardation of the retroflow, producing œdema; even this must not be considered as a sudden growth. It has been observed in various exhausting and enervating diseases, that transitory diminution occurs, and at convalescence comparative rapid enlargements have occurred.

"Braun, Chaerie and Späth place their symptoms mostly during chlorotic stages. These changes are noticed by all physicians who watch their course for years. A uniform growth of the tumor is shown, yet such cases cease only to enlarge when calcification takes place."

Of the sarcomatous degeneration of uterine fibroids, the literature is not complete. The cause of the degeneration is unknown. Of its etiology and mode of occurrence there have been many theories advanced which are too visionary to repeat. The tumors seem to occur at any period in life when the preceding fibroid takes a retrogressive change. The uterine mucous membrane is sometimes first invaded by the neoplastic growth. Of the seven cases occurring in my practice, this was true in three instances. In these cases the sarcomatous proliferation appeared to spring from the mucous or sub-mucous stricture of the uterine cervix and to thicken and increase by a rapid growth of spindle-shaped cells in vast numbers, producing a soft, flabby, highly vascular tumor, which accomodates itself to the cavity it finds, extending up into the fundus and being forced out of the os by the pressure of the uterine muscles.

This growth gives rise to exhausting and almost uncontrolable hæmorrhage and various hysterical symptoms which are very troublesome to control. It may eventually end in suppuration or may penetrate the walls of the uterus and encroach upon the adjacent organs by infection and cause by absorption, grave and fatal results simulating pernicious anæmia.

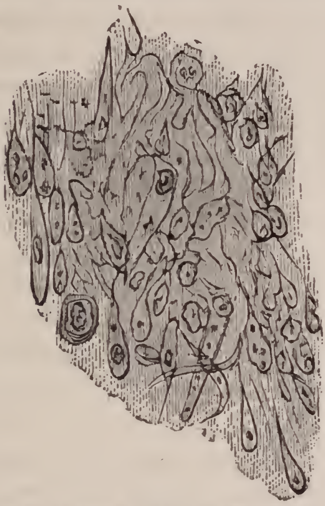

PLATE I, CASE I. [250 DIAMETERS.]

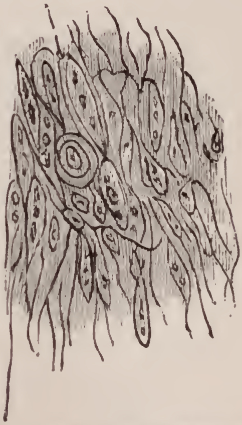

PLATE II, CASE 4. [250 DIAMETERS.]

The plates I and II show the microscopical structure of these neoplasms from cases I and III. The following is a history of the case:

Case I.—Was consulted, July 1st, 1875, by Mrs. A. S., aged 59, nullipara, who was very much debilitated from the effects of a frequent hæmorrhage, which had occurred with greater or less intensity, since the removal of a sessile fibroid, the size of an egg, two years previous. There had been a history of uterine trouble extending back for a period of 15 years. For the 16 or 18 months last passed, there had occurred between each of the hæmorrhages, a copious discharge of watery fluid containing shreds of mucous and connective tissue. Examination revealed a sessile mucous polypus, the size of a pullet's egg depending from the os. This was seized with the forceps and removed. It was composed of mucous and connective tissue filled with a mass of gelatinous blood and serum. Gave ergot, iron, quinine and strychnia.

July 18th — Discharge much less in quantity; darker and thicker in quality. The stomach rejecting the ergot it was for four days administered hypodermically. July 22d, the patient expelled eleven mucous polypi of the size and shape of small oysters. The hæmorrhage was small. Passed negative electrode into the cavity of uterus, with positive over the sacro-lumbar junction and allowed an interrupted current to flow for 15 minutes. This treatment was continued for two weeks, with benefit.

Sept. 7th.—Two more growths expelled and hæmorrhage increased; continued the faradization and the administration of iron, quinine and strychnia, and in addition the compound syrup of the hypophosphites, and ergot hypodermically.

Oct. 8th.—Seven more growths were extruded. Galvanized uterus for five minutes and faradized for twenty minutes afterwards. Same medication; patient feels better; appetite improved.

Dec. 20th.—Eleven more polypi escaped. Used the curette, but without result; no appearance of any more growths *in utero* Os rigid but walls soft and flabby.

Dec. 27th—Patient improving; hæmorrhage nearly ceased; discharge slight and clear, with no more shreds of mucous or connective tissue. Continued treatment and same medicine.

March 19th.—Patient, while out of the city on a visit, passed two or three more growths. Hæmorrhage slight; no pain.

April 1st.—Patient failing rapidly; no appetite; bowels constipated, nutrition poor; mind, despondent and gloomy. Discharge increasing and offensive; severe pain in right hip, knee and ankle.

April 11th.—No change for the better, but bad symptoms increasing in number and severity; discharge muco-purulent, containing shreds of decomposing tissue. Discontinued faradization and gave morphia hypodermically. Patient very nervous and wasted to a skeleton; medicine borne well, but nutrition entirely suspended.

June 15th.—Patient has failed very slowly; pain in right hip severe; has to be controlled by morphia; discharge copious, purulent and offensive.

July 10th.—Patient about the same, for the last month; at times seeming to rally and again falling back to below the original condition, until the 9th, when œdema appeared in the right lower limb, and is gradually creeping upwards.

July 12th.—Scarified the limb and allowed serum to escape.

Aug. 10th. — Same line of treatment, with concentrated foods and pepsine.

Sept. 2d. — Patient died to-day from exhaustion, having failed steadily since the last record. Pain continued and discharge became more free towards the last.

Case II. — I was consulted in the spring of 1875 by Miss R., niece of the last patient, aged 18, frail and cachectic, with lateral curvature of the spine and retroversio uteri.

These troubles were given their appropriate treatment, to which they responded slowly.

June 15th. — Upon introducing the sound to replace the retroverted uterus, a small pedunculated fibroid was found springing from the posterior portion of the fundus. The os was dilated; the growth seized with the polypus forceps, its pedicle twisted off and the body removed. The hæmorrhage was insignificant and easily controlled by the faradic current. After recovery from her complicated maladies, there still continued a slight serous discharge, and at the menstrual epoch a free hæmorrhage. This was finally corrected by a free use of faradization, ergot and iron.

Sept. 1st. — Patient passed three mucous-polypi, the size of a pullet's egg.

Threw a mixture composed of 10 C. C. tr. ferri chloridi and 10 C. C. fl. ex. a. ergota into cavity of womb. This was followed by severe pelvic pain, shock and chill, with some symptoms of peritonitis. These were easily controlled, however, by a free use of quinia and morphia. I have kept the case in view since that time, and up to the present there has been no return.

Case III. — I saw, in April, 1876, Mrs. B., aged 46; monipara, robust when in health, but now somewhat exsanguine from the repeated hæmorrhages, which recurred every 21 days. Severe pain in left ovary, small of the back, across the abdomen and severe gastralgia. Examination revealed sessile uterine fibroid with pedicle attached near left cornu; being closely embedded in a mass of sarcomatous tissue which sprang from the uterine mucous membrane. In the attempt to remove this growth, masses of the sarcoma were detached and forced out. The fibroid was at length secured and drawn down, its pedicle severed and the tumor removed, it being the size of a goose-egg. The curette was next used and the entire spongy mass removed, deep down into the healthy tissue; a suppository of bromine, with simple cerate, was then introduced into the cavity of the uterus and allowed to dissolve and trickle out. This treatment produced severe burning pain, vomiting and chill; but reaction soon set in and the patient made a good recovery. In 1877, another redundant mass was removed and the uterine surface cauterized deeply. The patient has done extremely well since, and is at present apparently enjoying perfect health, with the exception of some back-ache.

Sarcomatous degeneration of the uterine fibroid proper is not of rare occurrence, as in my practice this process has followed in four cases, and in two was further complicated by a secondary change to carcinoma. Fibro-sarcoma more often attacks the body of the uterus when not affecting the tissues of a polypoid fibroid, and is then composed of the altered and softened muscular fibrillæ, of oval or spindle nucleated cells, amid fragments of normal or partly altered muscular fibers. Interspersed in the tissue of the neoplasm are fat globules, etc. (These conditions are imperfectly shown, by my faulty drawings, from a power of 250 diameters. Plates III, IV and V are taken from cases IV, V and VI).

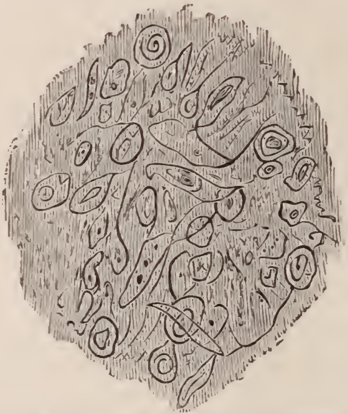

PLATE III, CASE 3. [250 DIAMETERS.]

Case IV.—I saw Mrs. B., multipara, aged 46, Sept. 15th, 1876, suffering with severe pain in the back, abdomen and head; hæmorrhage alarming and vomiting persistent. She had, from the date of the removal of a submucous fibroid three years previous, suffered for a long time with similar symptoms and a profuse watery discharge. The monthly flow had recurred with increasing frequency and severity until it was truly alarming. As the stomach would retain nothing, I at once gave hypodermic injection of ergotine, which somewhat checked the flow, but it soon recurred; faradisation held the hæmorrhage in check for some time, but it recurred. Injections of ice-water shared the same fate. In desperation I threw 20 C. C. of fl. ext. ergot and tr. ferri chloridi into the uterine cavity. This at once checked the hæmorrhage and permanently; but it produced intense pelvic pain, chill and vomiting, with strong symptoms of peritonitis, which responded easily to central galvanism. The next day there appeared an offensive discharge from the os, and the uterus was faradized, when an immense clot was expelled, followed by some

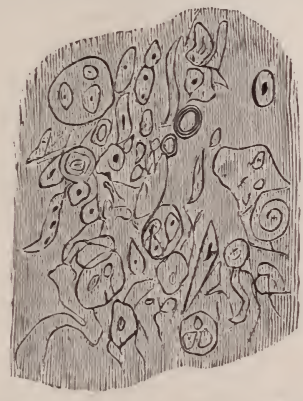

PLATE IV, CASE 6. [250 DIAMETERS.]

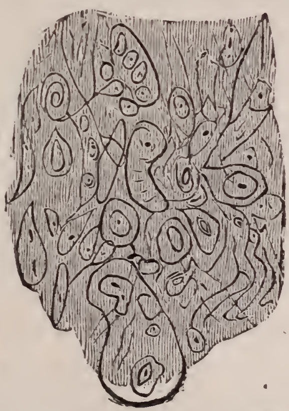

PLATE V, CASE 5. [250 DIAMETERS.]

hæmorrhage, which was easily controlled by the faradic current. As soon as the stomach would retain medicine, I prescribed ergot, iron and quinine. At the next menstrual epoch, free hæmorrhage occurred, but not as much gastric trouble. This recurred two or three times, when I determined to thoroughly examine the internal surface of the womb. This revealed soft pulpy walls, and each movement of the sound produced free hæmorrhage. The os was now dilated, and with the curette its inner surface was freely scraped, and a large mass of mucous polypi removed. Two weeks afterward, a slight flow appeared, the curette was again used, but only a small amount of fungous tissue was obtained. The faradic current was used daily for some months, and ferruginous tonics with nutritious foods. The patient slowly improved, but is still troubled with pelvic tenderness, some metritic trouble and gastric irritability.

Case V. — February, 1877, I removed a large fibroid from Mrs. D. B., multipara, 59 years of age, robust when in health, but now exsanguine. Upon dilating the os and attempting to seize the tumor with obstetric forceps (it being so hard and large that the vulsella was useless), large masses of a sarcomatous growth were so closely packed around the tumor that the effort failed. The os was then incised and the hand introduced and the sarcoma broken up and delivered. The fibroid being too large to deliver, it was laboriously divided and removed piecemeal; the hæmorrhage was copious and the patient very much exhausted. The walls were next hastily scraped and rinsed out with carbolated water. The faradic current was used and the hæmorrhage controlled. The patient made a very rapid impovement, and seemed to be getting well, but the discharge did not cease. In 16 months the patient returned with a well marked sarcomatous growth protruding from the os. This was repeatedly removed and cauterized, only to again reappear.

Jan. 24th, 1879. — Anæsthetized the patient, dilated the os and commenced using the curette vigorously upon the uterine walls, scraping off every vestige of softened tissue. Upon working around to the right side, to my surprise, I discovered an intramural fibroid. The serrated scoop was used, and the growth enucleated, which was nearly the size of a goose-egg. The scraping was continued, and upon its completion the uterus was washed out with a strong solution of ferric chloride. The shock and chill which followed were but slight and the patient reacted well. The uterus contracted well, and soon admitted the sound, only five centimeters. The tumor was of clear white, fibrous, with some muscular and connective tissue. The neoplasm was clearly sarcomatous; specimens of which, in connection with that of the next case were sent to Prof. Byford, of Chicago, who upon microscopical examination, confirmed the diagnosis. For some time the patient seemed to be improving and for several months the hope was indulged that the trouble was controlled. After a time, however, the fungus re-appeared accompanied by marked radiating pains and a cachectic countenance. I took the patient to Chicago, April 7th, to consult with Prof. Byford, who pronounced the present growth clearly encephaloid in character. Upon returning home, I removed every vestige of the fungus degeneration, and put the patient upon free use of arsenic. She is now apparently improving.*

Case VI. — Oct. 12th, 1877, I saw Mrs. H. in consultation with Dr. J. P. Anthony, aged 39, blonde and of full habit, but now exsanguine from repeated floodings. She had never been enceinte. She had complained for 16 or 18 months of pelvic pain and heaviness; severe pain in back and abdomen, neuralgia, inter-current hæmorrhages and profuse watery discharge. A sarcomatous growth protruded from the os of the size of a hen's egg, accompanied by considerable vaginitis and pelvic cellulitis. The patient was of a peculiarly nervous temperament. Although my friend, the doctor, was an old practitioner of the most unquestioned experience and skill, the patient fancied she could not take the medicine which he had prescribed. A change in form of the medicine was therefore made; but this failed to suit our exacting patient, and I, at her request, although with many misgivings, assumed control of the case. The patient was now put upon as mild and tasteless tonics as possible; but at the best little medicine was taken. The faradic current was used daily with the effect of entirely checking the hæmorrhage and discharge.

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* The fungus again appeared, and patient died at end of third month.

Nov. 10th. — Patient being somewhat stronger, was anæsthetized and the sarcoma removed carefully and deeply, down into the tissue of the posterior lip of the os. She improved after the operation until the second week in December, when the growth again made its appearance from above.

Dec. 18th. — She was again anæsthetized and the os dilated when, upon removing a portion of the redundant growth, a fibro-polypus, the size of a goose-egg was discovered. This was seized and twisted off and all the neoplastic growth removed with the curette. Patient rallied slowly from this operation ; but after a time, her appetite improved, the movements became more regular and the countenance assumed a more florid hue, showing that the red globules were increasing in number.

Jan. 4th. — The sarcoma again developed to the size of half a hen's egg. This was again removed, but not as thoroughly as was desirable as the patient refused to inhale an anæsthetic, and a hypodermic injection of morphia was given in its place. The attempt was next made to destroy the growth by applying daily, to the seat of trouble, a solution of bromine in alcohol 1 to 5. This seemed only to retard the growth and not to destroy it. From this time on patient grew gradually weaker, and in spite of every effort to check the ravages of disease it steadily progressed toward a fatal termination. The discharge increased and became offensive.

May 14th. — My health having become impaired from overwork, aggravated by septicæmia (contracted from a wound upon the finger received during an operation), I was compelled to leave the city for recuperation. The case then passed into the hands of my friend, Dr. T. Eckles, who attended her until her death, which occurred in July, from exhaustion and the encroachment of the neoplasm upon the pelvic viscera. During all the subsequent course of the disease, no attempt was made to remove the growth, and the patient took but very little medicine and used but a small amount of food.

Case VII. I was called April 1st to see Mrs. K., in consultation with Drs. Seele and Lee. I found patient complaining of weight in pelvis, pain in back and loins, copious hæmorrhage. Examination showed the uterus enlarged to the size of pregnancy at the fifth month, and lifted above the superior strait. The os patulous and a copious sanio-purulent discharge constantly escaped. The finger, introduced into the os, encountered a semi-solid granular mass of peculiar feel. The sound entered with some difficulty, giving a sensation of contact with calcareous matter, and giving rise to copious hæmorrhage. Further examination convinced us that we had encountered the anomally of a "uterine stone," or calcified fibroid. The patient was then anæsthetized and attempts made to enucleate and remove the tumor. This signally failed, and I soon became convinced that the stone was too large to remove — *per vias naturales.* On consulting hastily with my colleague, laparo-elytrotomy was decided upon. This being my maiden effort in this direction, and, in fact, never having seen the operation, and only having cursorily read the report of Thomas' and Skeene's operations, I approached the case with some degree of awe. The hand was passed into the vagina and the relation of the parts learned. An incision was then made, extending from the crest of the right ilium to the border of the symphysis pubis. The epigastric artery was tied and cut and the peritoneum pushed up, and then an incision was made through the tissues to meet the finger in the vagina. The opening was now enlarged as much as possible and the os dilated still more and an attempt was made to grasp the stone and remove it. This, however, failed, from the size of the concretion. After incising the os and dilating the external incision as much as could be possibly done with safety and the impossibility of removing the stone in this manner ascertained, a silver retracter was bent so as to conform to the curve of the uterus, forced in between its walls and the calculus, and, with a fine finger saw, the mass was slowly and laboriously divided and removed in halves. Even this was so large that the tissues were lacerated in its removal. The uterus was then cleared of a mass of sarcomatous tissue, which surrounded the stone, and, in fact, which imperfectly merged from a true sarcoma into a granular calcareous mass. The uterus was next replaced, the walls of the incision brought together and secured with silver wire sutures coated with carbolized colodion and covered with a layer of carbolated cotton. The vagina was then washed out with carbolated water and a pledget of carbolated cotton placed therein and the patient put to bed and allowed to recover from the anæsthesia.

The patient endured the operation remarkably well. The shock was not excessive, the hæmorrhage, although profuse, was yet not exhausting. One grain of opium by the rectum was then given and five grains of quinine by the mouth. The patient rested well through the night and in the morning was remarkably comfortable.

I now left the patient in the care of Dr. Seele, the family physician, who reported as follows:

April 5th. — The patient doing finely; vaginal discharge copious and purulent with shreds of decomposing tissue. Reaction fully established. Temperature, 37.8°; pulse, 85; appetite good; urine, high colored and loaded with floculent matter. Continued iron and quinine.

April 9th. — The patient improving, but I find strong urinous smell in secretion from vagina. Rinsed out vagina and uterus with solution of carbolic acid and tannin.

April 14th. — Patient convalescing rapidly. Incision healed by first intention. Involution of uterus slow but satisfactory. The discharge gradually lessened and the urinous odor disappeared on the tenth or eleventh. The tumor proper, after removing the sarcomatous tissue surrounding it, measured 17½ Ctm. in its longer diameter and 14¼ Ctm. in its shorter. The weight was 4½ lbs. The tumor was composed of almost solid calculi of phosphate of lime and magnesia, carbonate of lime with interstitial fibers of fibrous tissue, albuminous shreds, etc. The surrounding magma consisted of sarcomatous tissue closely packed with cretaceous or calcareous accretions from the size of a pea to that of fine sand, being more closely deposited around the calculus and shading off towards the uterine parenchyma to a few scattering granules. There was estimated to be two or three pounds of this tissue.

Article V.

Traumatic Insanity in its Medico-legal Relations. By Daniel R. Brower, m.d., Professor of Mental and Nervous Diseases, Woman's Medical College; Attending Physician for Mental and Nervous Diseases, St. Joseph's Hospital; and formerly Superintendent Eastern Lunatic Asylum of Virginia. Read before, and published by request of, the West Chicago Medical Society.

The importance of traumatic injuries of the head in the etiology of intra-cranial diseases has long been recognized. Hippocrates wrote: "Nullam capitis vulnus contemnendum," and this sentiment has been translated by Liston: "No injury of the head is too slight to be despised or too grave to be despaired of."

This axiom teaches that not only may as serious a condition as insanity, but death itself, result from an apparently very trivial scalp wound.

We had under observation during the late rebellion a case of gunshot wound of the head that in twenty days resulted in death, and *post mortem* examination showed no injury to the cranial bones, but an abscess in the brain and associated meningitis and encephalitis. This case was one doubtless of contusion of the brain, with solution of continuity of its constituent elements and without injury to the bone — the skull undergoing change of form suddenly, and the cerebral substance offering less resistance than its bony covering, extravasation and laceration of brain tissue ensued, and then the secondary condition above detailed.

The same kind of an injury may result in insanity, and the difference consists, probably less in the nature of the injury and its associated phenomena, than in the inherent peculiarities of the individual.

If it should occur in one who possesses the insane temperament, instead of the rapidly progressing pathological process of acute meningitis and encephalitis, we may rather have the slow proceedings, chronic processes, low grades of inflammatory changes, or simple disturbance in dynamical relations of brain elements that result in insanity.

This suggests the important medico-legal fact that insanity is a chronic disease; that the alteration in brain structure which precedes it requires months, years, or it may be generations for its complete development. The grandparent, for example, may have been addicted to chronic inebriety; the parent may have, as a consequent inheritance, neuralgia, or some other of the neuroses, and the son, insanity. The disturbance in brain nutrition, beginning with the grandparent, not only undergoing transmutation in transmission, but becoming more profound, and only, in the third generation, becoming insanity.

It also follows that pathological conditions, so slow in their advancement, must have a corresponding amount of *time* as an essential factor in their recedence, and therefore no man possessing a healthy brain organization can be rendered insane by any emotion, no matter how violent it may be, and then have restored to him healthy brain action on the subsidence of the emotional disturbance. The plea of impulsive insanity, as from time to time presented in our courts (witness the Sickles, Cole and McFarland cases), has no foundation in scientific observation. It is simply the cunning device of astute lawyers and so-called experts, who either have badly-digested views on the subject, or else are impelled to their opinion by motives other than love of science.

The cranial injuries may be more severe than they seem to be. There may be, for example, fracture of the inner table of the skull, and not of the outer; the blow may not have had sufficient force to fracture both, or its direction may have been disadvantageous, and then all that ordinary examination reveals will be a simple contusion of the scalp, and this with quite extensive fracture of the vitreous table; then we have a case which, examined a few years afterward by the medical expert will exhibit only a cicatrix of the scalp, and the amount of injury done to the internal soft parts can only be determined by a careful study of the history of the case. This history, if the connection between the injury and a criminal act is complete, will show a neuropathic diathesis—will show that after the injury cephalalgia was frequent, that the sleep was insufficient in quantity, or else disturbed by dreams, that after a time, change was noticed in the emotional and then in the intellectual part of the mind; in rare cases both may have occurred simultaneously.

Three cases that serve to illustrate the medico-legal relations of this subject have come under our observation, two of them recently, and are here related.

Case I.—Capt. ——, æt. twenty-three, was wounded in the right parietal region in one of the early campaigns in Virginia; he was rendered insensible for a short time, but speedily recovered after being carried to the hospital. Examination showed a contused wound of the scalp, without any involvement of the bone. In a few days he returned to his command, apparently well. Prior to the beginning of the war, he was the junior partner of a prominent law firm in New York, remarkable for his steady and regular habits, his industry and mental brilliancy. Impelled by patriotism, he gave up his chances for preferment there, and entered the army as a private. The qualities, and these alone, which so distinguished him in New York, rapidly advanced him to a captaincy. Shortly after the injury, he began to have headache and to pass sleepless nights. About four years afterwards a change was manifest in his emotions, in that he became irritable, resentful, quarrelsome and dissolute. The attacks of headache became more severe, and were accompanied by an irresistible impulse to inebriety.

He had a wife and two children; prior to this condition, he always manifested for them the warmest attachment, but now, during the paroxysmal attacks, he treated them brutally, and yet, during the interval, his old love continuously showed itself.

These abnormal states became more frequent and violent, and finally his wife, not understanding their pathology, lost her patience, and became divorced, thus cutting him loose from his only balance-wheel.

He then left this country and went to France, and became an active member of the Commune. Here, as elsewhere, he was a leader; his outrages were conspicuous, and furnished abundant occupation for his irregular explosions of nerve force. At the close of the Commune, he escaped from France, and we last heard of him in the diamond fields of South Africa, as having escaped from jail, after a conviction for attempted murder and mail robbery.

Case II.—Jeremiah Kennedy, æt. thirty-nine, born in Ireland, grew up a quiet and orderly youth, affectionate and amiable in disposition, with strong religious sentiments. He entered the army at the beginning of the war, as a teamster, and in 1862, while attempting to stop a fight between two of his comrades, received, with a scale weight, several injuries to his head; he fell senseless and remained unconscious for twenty-four hours.

About one year after this he spent a summer in the Andersonville prison, exposed to the rays of an almost tropical sun, and during this time was much troubled with headache and sleepless nights.

He returned home at the close of the war, with a manifest change in his mental traits; he was now very quarrelsome, and subject to fits of violent and ungovernable fury. His family became afraid of him, and he conceived the delusion that they were attempting to poison him. About this time he had an attack of what was doubtless *grand mal* epilepsy. A little further along he became possessed of the delusion that other persons desired to poison him, and, as antidotes, carried about his person camphor and various roots, and frequently took doses of sweet oil. He also became convinced that numerous persons were conspiring against his life, and to defend himself against them, always carried a knife and a pistol. He also, about this time, became possessed of an intense aversion to his church and its priesthood, regarding the latter as the most active agents in the persecutions to which he thought he was subjected.

In the year 1870 he left his home and traveled from place to place, for the expressed purpose of getting rid of his tormentors; but found it impossible to escape their machinations.

During this time he had numerous attacks of *petit mal* epilepsy, and frequent attacks of epileptiform neuralgia. These attacks of neuralgia were very severe, were associated with marked pallor of the face, and were promptly relieved by inhalations of nitrite of amyl; the pain always commenced in the head and ran down to the epigastrium.

He had at this time, also, attacks of transitory fury so intense that his friends then regarded him as dangerous and irresponsible. His wife had often spoken of his peculiar mental state, and several times had almost determined to have him adjudged insane. She was well convinced that at these times of excitement her own life was in jeopardy, while at other times he was kind and affectionate.

The case went on from bad to worse until finally he shot his wife, killing her instantly, and then attempted to kill himself. The night of the killing, before they retired, they were heard by people in an adjoining room kissing and cooing like young lovers. They were not intoxicated, although a small bottle of whisky, smelling strongly of camphor, was found in the room, about half empty. The man says he was aroused by what he supposed was some of his numerous persecutors attempting to break into his room—he seized his pistol and fired at a person walking rapidly across the room, but the whole affair seemed to him like a dream. When he came to his senses, and found that he had killed his wife, he immediately attempted to kill himself.

He was arrested and tried for murder. The plea of insanity was entered in defense, and Dr. H. M. Lyman and myself selected as experts. The foregoing history was thus gathered together. We found, on examination of the man, a cicatrix with a slight depression at the juncture of the right coronal with the sagital suture; and two other scars over the right temporal ridge without depression. The former he claimed was painful to the touch and was the starting point of the paroxysms of pain previosly mentioned.

We also ascertained that he had one paternal uncle, three cousins and a brother insane, and that his father was a person of very unstable mental organization.

Dr. Lyman and myself, with this history before us, came to the conclusion that he was an epileptic, that he had had frequent attacks of *petit mal*—of psychical epilepsy and of epileptiform neuralgia—and occasional attacks of *grand mal*—the explosions of nerve force taking place through the motor, the sensory and psychical areas of nerve action; and moreover that the killing was done while he was in a state of epileptic irresponsibility.

The prosecution endeavored to account for all his irregularities by attributing them to the effects of whisky, and in corroboration of this view the small bottle of whisky, half empty, played an important part. The judge instructed that if the insanity was the result of inebriety it was no defense — a remarkable instruction — and it resulted in a verdict no less surprising, to wit: "We, the jury, find the defendant guilty in the manner and form charged in the indictment, and fix his punishment at death by hanging. We, the jury, also find the defendant insane at the present time."

The judge granted the motion for a new trial, but Kennedy relieved the case of any further legal relations by committing suicide the day after. There was found among his effects a note, written the first day of the trial, which showed that his failure to sooner commit suicide was altogether due to a want of opportunity.

Case III. — Jacob Villinger, æt. fifty, came into the world with an insane heredity. His paternal grand-mother, two of his paternal uncles and two paternal cousins died insane. He manifested a degree of mental impairment at the age of puberty sufficient to earn for himself the sobriquet of "silly" and "crazy" among his companions; he grew up, however, to be a man of ordinary mental capacity, with industrious and frugal habits, raising a large family and accumulating considerable property, for one in his station.

At the age of about forty-two, while at work on the railroad track, he was struck by a passing locomotive; his left arm fractured, and his head injured sufficiently to produce a concussion of the brain, followed by loss of consciousness that continued for several days. After his recovery he complained of severe and frequent headache, had restless nights and gave evidence of a change in emotional condition, by irritability, fits of crying and dislike for society. One year after this injury he sustained another. A stair-case, he was assisting in erecting, fell, and in so doing struck him on the head and knocked him senseless.

After this second accident his mental perturbation was more manifest; he neglected his work, squandered his property and made himself penniless, and soon gave evidence of delusions; thought himself possessed of great wealth, boasted of being the third son of God, wandered about his neighborhood hatless, coat-less and barefooted in midwinter. He was ardently devoted to his wife; he told several persons that she was too good for this world; that he was the third son of God and must send her to heaven; accordingly, in June 1878, in a public place, in the presence of several persons, without any warning or any evidence of passion or excitement, he shot her. She died immediately.

The plea in defence was insanity. Dr. H. M. Lyman and myself served as experts. With this history before us and with the evidence of disturbance in the functions of the nervous system, as shown by inequality of the pupils, well marked nystagmus, fibrillary twitchings of the muscles of the face, back, thorax and lower extremities, and the evidence of the jail attendants that he slept scarcely at all, ate but little and only such things as were brought from without, believing the jail food to be poisoned, we had no hesitation in saying that he was insane at the time of the homicide, and that he was insane at the time of the trial.

After this opinion was rendered, E. P. Weber, Esq., the prosecuting attorney, abandoned the case and the jury returned a verdict of insanity without leaving their seats.

ARTICLE VI.

DENTAL HINTS FOR COUNTRY MEDICAL PRACTITIONERS. By G. NEWKIRK, M.D., Wenona, Ill.

PART I.

It is probable that fully one-half your so-called "country readers" are located in towns or in the country where they are more or less remote from a resident dentist. A town may be large enough, in connection with the country tributary to it, for the support of one or two physicians, but not desirable as a location for a dentist; or if there be one, he may be grossly ignorant and incompetent. It is for physicians so located, and for the good of their patrons, that the following hints have been jotted down.

The country physician cannot avoid the necessity of paying some attention to carious teeth, much as he may desire to be rid of any responsibility connected with them. People *will* neglect proper attention to their teeth till the imperious mandate of pain compels them to seek relief from the dentist, if one be at hand, otherwise the nearest physician. They are generally ignorant regarding the nature of their dental organs, and usually greatly underrate their value; and it is to be lamented that physicians are often in this respect nearly as ignorant as their patients. With the city practitioner this ignorance matters not so much, for he can thrust off all cases upon the resident dentist; in fact he seldom sees them, thus avoiding nearly or quite all the responsibility which his country brethren are compelled to accept.

No reputable physician, in general practice at the present day, is disposed to assume any of the work properly belonging to a dentist, where there is one near at hand, but if there be none, he has no alternative but to do the best he can, both for the immediate relief and the permanent interest of his patrons. Here being a responsibility he cannot avoid assuming, what is his duty in the premises?

Plainly, he ought to place himself in the possession of such information, appliances and tools as are necessary in order to promote the best interests of his patients. He cannot, of course, assume to do the general work of a dentist, but he should do enough in that direction to put many teeth, such as are and have been commonly sacrificed, on the road to a competent dentist and salvation. He ought to be able to determine whether or not a tooth would be, in proper hands, probably salvable. He ought to be prepared, through knowledge and means, to give temporary relief to many aching or sensitive teeth, and temporary protection also, until some one specially skilled may be reached, who can make the relief and protection permanent. He ought to make himself thoroughly conversant with the special and relative anatomy of the jaws and teeth, and their nervous relations with other parts of the head and face. He ought to know the usual time and order of the eruption of both the temporary and permanent sets, the special form and position of each, both before and after eruption; this in order that he may be accurate in diagnosis and operative procedure, and least of all liable to mistake between a temporary and permanent tooth; that he may know how long the temporary tooth should be conserved, and when it may with advantage be removed. He should be sufficiently familiar with the special structure of each tooth and proper methods of diagnosis to be able to determine, upon examination, whether in a given case pain or uneasiness is caused by sensitiveness of dentine, a nearly or quite exposed pulp or inflammatory action in the alveolar socket (periodontitis). Without this knowledge, he may, on the one hand, sacrifice perfectly salvable teeth; or, on the other, attempt an impossible salvation, to the great discomfort of his patient, and humiliating annoyance of himself. The usual course of ignorance, however, is to commit destruction; the extraction of the tooth, however serious the loss to the patient, is felt to be an ultimatum, and on the principle that "dead men tell no tales," the ghastly heroic remedy is the one oftenest administered. But it is not a remedy to be always willingly administered by a man with a conscience.

But inasmuch as many of the teeth that are brought to us must of necessity be extracted, we ought to know so well the special forms and insertions of teeth, and the special forms of instruments to correspond, that we may always make a correct application of the one to the other, where it is our duty to use this means of relief.

For information, clear and exact upon this subject, every country physician should place himself in possession of the little book, "Robertson on Extracting Teeth," a treatise which is much more in fact than the name would suggest.

Now, what ought he to have in the way of tools and appliances?

As his operative procedures will be largely in the way of extractions, he ought to have a well-selected stock of forceps. (If he has a turnkey, let him present it to his butcher.) It is not at all necessary that he have a great number, but from the multitude of forms, it is essential that he shall know how to select the few he really needs. Many of the instruments placed upon the market are of very inferior quality, in both form and finish; many are applicable only in rare cases, and the purchaser must know how to *reject*, in order to *select*. And here let me say that whatever may be saved by the purchase of the cheaper instruments, will be but a trifling consideration for the difference in quality and the annoyances that will certainly be experienced in their use. It will be far better to get along for a time with half a set of first-class instruments, than to be in possession of a full array of those of inferior grade, each one of which shall be as "Confidence in an unfaithful man in time of trouble, is like a broken tooth and a foot out of joint."—Prov., 25 : 19.

It will be found also, that for cleanliness and freedom from rust, money can hardly be better spent than for the extra cost of nickel-plating. This is especially true as to forceps, and the extra cost will be about fifty cents each.

Let me remark first in this connection, that by far the greater number of teeth you will feel compelled to extract, as many of you know by experience, will be bicuspids and molars. As physicians, you will seldom have to extract anything forward of the bicuspids above, and not often forward of the molars below. You will be able generally, and you ought to seek to avoid especially, the extraction of all incisors and canines. Except in rare cases the dentist only should take this responsibility. The lower incisors seldom decay, and seldom need extraction by any one, and we must be exceeding slow to extract lower bicuspids, they being often of great importance for articulation with artificial teeth above. In selecting forceps, therefore, the weight of importance rests with those for molars generally, and upper bicuspids. What instruments are best and most generally available? What shall we buy? Negatively we are to make no investment and place no dependence in the molar forceps, styled "Universal." They are universally unfit for anything, but fracturing teeth at their necks. Whatever you may do without besides, have two pairs of upper molar forceps, right and left; and, in my judgment, there is nothing better than those known as the Harris', designed by the king among dentists, in his day. "Improvements" on his patterns have usually been injuries. Next, a pair of lower molar forceps, of either the Harris or Hutchinson pattern. The numbers of these instruments as manufactured by S. S. White, are: Uppers, 18; lower, Harris', 15; Hutchinson's, 47. Of these, I rather prefer the last named. And here let me say that, both for the sake of convenience, and because whatever instruments he sends out can be always relied on to be the best of their kind, I shall refer only to those manufactured by S. S. White by number. It is always safe to have an instrument manufactured by this the greatest manufacturer of instruments in the world; and his goods may be ordered directly from either of his four great depots, at Philadelphia, New York, Boston or Chicago.

For upper bicuspids have an instrument nearly straight, No. 11 or 40, the former preferably, and these will do for any ordinary case of extraction of upper canines or incisors. Here you are, with three pairs of forceps, supplied abundantly for all except unusual cases of extracting upper teeth, and one for all lower molars. Nos. 14 or 21 will complete the list for lower bicuspids, canines and incisors, in the very few cases where these have to be sacrificed by any one but the professional dentist.

Now, there ought to be, besides, a special instrument for upper wisdom teeth where these are small and overshadowed by the 2d molar, and the purchase of the Harris *dens sapientiæ* forceps, which is small enough to constitute a child's molar forceps, will be a good investment; or the sub-alveolar forceps, No. 77, recently invented by Dr. Tees, which is a valuable root forceps, and admirably adapted to difficult wisdom teeth extractions, will do equally as well.

For a general root forceps, Nos. 7 and 69 are about equally useful, and either will do for children's small teeth, and for lateral upper incisors, or crowded lower teeth of the second set.

Finally, and to complete the list, in order to meet numerous cases where it is well nigh impossible, or entirely so, to seize a root without nipping of a fragment of the alveolar process, or where there is a hollow crown so deeply decayed as to make fracture almost inevitable by the use of an ordinary instrument, add Parmly's bayonet shaped alveolar forceps, No. 32—applicable almost anywhere. With these eight instruments in possession, and thoroughly familiar with their qualities, you may consider the cases few and far between that you may not in some way successfully meet.

Of course there are many instruments that have their peculiar fitness for rare and difficult cases, but they are scarcely available for any but the specialist. A good instrument is like a good book in this, that there is nothing like being thoroughly familiar with it—better by far than a superficial and unfamiliar acquaintance with many.

Being instrumentally prepared for extracting, in cases where extracting cannot be avoided, the country physician should have certain other things, very essential to his own success and his patient's welfare, which he can obtain at small additional cost.

First of all, if he has not a physician's operating or invalid chair, he should have some sort of a head rest. This is a matter of necessity, not alone for operations upon teeth, but for examinations of the mouth and face, the nares, the eye, medical and and surgical applications to these, removal of foreign bodies, in short, anything to be done about the head and face. An excellent "rest," adjustable to any common chair, and to any position, can be bought of S. S. White, at a price varying according to style and finish from $7.50 to $15.00. It can be conveniently folded and carried into the country, and be often made useful in placing a patient in a position favorable for a critical examination, and accurate medication of the fauces in case of tonsillitis, diphtheria, etc. We all know by experience how nearly impossible it is to get a patient's head properly held by the unskilled assistant.

The next thing I shall mention, which no physician should be without, is a small non-magnifying mouth mirror. A very good and servicable one can be obtained for $1.00 or $1.50, and you may pay as much more as you wish for ornamental finish. If you have no laryngoscope you can make this answer some of the purposes of that instrument. You will find it very useful for throwing light into obscure corners of the mouth and throat, and affording views thereof, aside from its essential character as a dental mirror.

Next, pliers. If you are to examine and in any way treat teeth, you need a delicate pointed, nicely curved pair of these; and when you are once used to them you will find them available for many purposes beside; better by far for any delicate use than those generally found in surgical cases. This want may be well and cheaply supplied by purchasing the new "College" pliers for $1.00.

In order to make anything like an examination of a cavity of decay in a tooth, to determine its depth, direction, and bearing upon the life and salvation of the organ, you should have a few instruments adapted to opening into it and removing the debris. It will be necessary often to cut away the rough edge of enamel overhanging dead dentine, and for this purpose a good sharp chisel will be required. Among the many forms in use by dentists, there is one of more general availability, perhaps, than any other, represented in different sizes by Nos. 43, 44 and 45, of the S. S. W. set. Of these three instruments, No. 45 will answer most purposes, for the mere object of preparing the way for an examination. It can be used right and left, forward or backward, and can be sharpened on an oil stone till worn out. This will cost 60 or 70 cents. To remove the debris, a half dozen excavators and the same number of hand burrs (round) will be required, and of the former, Nos. 1, 5, 10, 18, 24 and 29, of the latter, 2, 4, 5, 7, 8 and 10 would be goood selections. Add to this list for opening into nerve canals, a half dozen small drills; and for inserting gutta percha stoppings, Nos. 1 and 4 S. S. W. burnishers. The whole cost of these will not exceed $5.

Additionally, for purposes of examination, you will need a syringe with a small curved point, for carrying a stream of water directly into cavities, to clean out the chips made by burrs and excavators. A hard rubber syringe good enough for the purpose, can be had for 75 cents.

For drying cavities, either to obtain a correct view for applying medicines or inserting temporary stoppings, it will be necessary to have on hand spunk or spongoid, and absorbent cotton. These articles cost 20 to 25 cts. per package, and their uses like many other things, in the way of dental apliances take a wide range. The physician and surgeon will find in ordinary practice nothing better than this "absorbent" cotton for making nice applications to tender and delicate surfaces, or for drying such parts preparatory to the application. It may be useful for washing or wiping out viscid and unwholesome secretions in cases of sore mouth and throat, in ridding the eyelids from the exudations of conjunctival inflammation, removing foreign substances from within the lid, and for cleansing the nares or external ear.

Although I have never so used it, it strikes me that either spunk, spongoid or the "absorbent" cotton, disinfected, would be excellent for absorbent dressings in the treatment of wounds. I believe the cotton, which is very coherent and readily formed into a firm string, would be excellent for draining punctured wounds. So much for the essential tools and appliances.

Now, a word as to a few medicaments and stoppings, adapted to giving present relief and temporary protection to an aching or sensitive tooth that may be saved. Every physician who treats teeth should have at hand the following:

Creasote and morphia	0.05 to 4.0
Clove oil " "	0.05 to 4.0
Bottle of sandarac varnish.*	
Carbolic acid; dissolved crystals.	
A package of gutta percha pelletts.	

I am strongly averse to advising any physician to have arsenic in readiness for use on teeth. It might, in rare cases, be used with advantage by skillful hands, but I am very sure that in the hands of any but a most competent and careful dentist, it is an agent far more likely to be potent for evil than good. You had better leave arsenic, as an applicant to teeth, in the hands of dentists only, and they had better use it but rarely. For my own part, whenever I find it necessary to extirpate a pulp, I much prefer giving an anæsthetic, and doing the operation quickly and at once with the dental engine, rather than use arsenic.

In this connection, I would remind any surgeon whose eye may follow this communication, of a fact he has probably seen mentioned before: that the dental engine, with its saws, bits, burrs and trephines, is capable of great usefulness in operations upon bone; in cases of necrosis, some resections, ununited fracture, overriding fragments, removal of tumors, etc., and any surgeon may find it occasionally of great advantage to call this instrument into requisition.

Dr. W. E. Garretson, of Philadelphia, has written recently a monograph specially upon this subject.

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* This can be obtained ready prepared, or made by dissolving gum sandarac in alcohol, to a syrupy consistence.

Hints upon examination, extractions, alleviating treatment, and temporary stoppings, will occupy the space allotted to me for another paper.

(*To be concluded.*)

ARTICLE VII.

ALCOHOLISM; ITS TREATMENT FROM AN ANALYSIS OF ONE HUNDRED AND TWENTY-FIVE CASES (Records of which are to be Found in Mercy Hospital.) By E. C. HELM, M.D., House Physician.

Therapeutically it has been found convenient to divide alcoholism into six classes:

1. Those cases in which the most prominent symptoms are insomnia, restlessness and anorexia.
2. Ditto with considerable gastric disturbance.
3. Delirium ebrosia.
4. Alcoholic stupor.
5. Cases with the premonitory symptoms of delirium tremens, characterized by anorexia, insomnia, restlessness, tremulousness, illusions and hallucinations.
6. Delirium tremens.

Of the nationalities represented, one-half were Irish, one-fourth were American. The rest were of various nationalities. The number of married to unmarried was about equal. The relation of males as to females was as ten to one. Their ages ranged from twenty-two to seventy-eight. The average age was between thirty-seven and thirty-eight. The first two classes comprised about forty per cent. of the cases. The third and fourth classes about five per cent. each. The fifth class comprised fully thirty-five per cent. of the cases. The sixth class, the remainder, or fifteen per cent.

The first item of treatment in these cases was the withdrawal of alcohol in every form (though a small proportion of the cases, who occupied private rooms, insisted upon having from one to three small portions of brandy or its equivalent, during the first day, and as their demands were, in many cases, seconded by their friends, they were given the brandy, but *only* for the *first* day).

The first class of patients were put in bed, in a quiet room, and given

Pot. brom	1	3
Tr. digital		25

every three hours. If, as their usual bedtime approached, they were still restless and uneasy, they were given chloral hyd. grms. 0.6 to 1.0 every half hour until three doses had been taken. This usually insured sleep. Should it not, they were given no more chloral before midnight, and then but one, or, at most, two doses.

The second class of cases were treated in much the same way, except that in addition to the above treatment they were given 4 grms. of

℞ Acid carbolici		4
Tr. gelsemini		
Glycerinæ āā	15	
Tr. opii. camph		
Aquæ āā	50	

before meals.

If there was very much pain in the epigastrium a sinapism usually gave relief. In not one instance did delirium tremens follow either of these classes of cases. The third class of cases were given bromide, chloral and digatalis, with cold to the head, and were kept quiet, even if their arms and legs had to be pinioned. It was, at times, necessary to give the medicines by the rectum or through an œsophageal tube.

These cases usually quieted down in a few hours, and sank into a heavy sleep; upon awakening, they usually passed into either the first, second or fifth class. Very rarely did it occur that delirium ebrosia was followed by delirium tremens.

The fourth class were let alone, merely kept quiet, and given an abundance of pure air. Upon awakening, they usually passed into either the first, second or fifth class (though a few cases passed into delirium tremens), and were treated accordingly.

The fifth class were treated as if in the first class. Sleep was nearly always induced by the before-mentioned remedies. Instead of sleeping, a few patients perspired profusely with a cold, clammy skin, a weak, frequent, easily-compressible pulse, etc., being that peculiar condition bordering on collapse, in which most of the text-books assert that alcohol is imperatively demanded. Be that as it may, it is a fact that arom. spts. of ammon. (or ammon. carb.) with camphor, *always* produced the desired effect, and that very speedily. After arousing them, the bromides and digitalis would be continued, and with the chloral at night, pushed until sleep was obtained. In not a single case was this treatment followed by delirium tremens or any other unfavorable result. Eighty per cent. of the cases of delirium tremens were in that condition when first seen, and instead of the delirium tremens following the withdrawal of alcohol, it was found that in all these cases they continued to drink until delirium tremens ensued (except in those few cases, i. e., the remaining 20 per cent.), in which the drunken stupor or delirium ebrosia terminated in delirium tremens. In patients with delirium tremens, bromides, chloral and digitalis were freely used, i. e., 1 grm. to 1.3 grm. every two hours until sleep was induced.

There were four deaths in these one hundred and twenty-five cases. One death resulted from an overdose of chloral hyd. which the patient took when the attendant's back was turned. This occurred but a few hours after entering the hospital. The second fatal case was one with acute capillary congestion of the brain and lungs. In this case death occurred a few hours after entering the hospital, indeed, the patient was almost moribund when first seen.

The third case had delirium tremens for several days before entering the hospital. This soon became so violent as to simulate acute mania, if, indeed, it did not terminate in acute insanity. Though he was closely confined in his cell, it was with the utmost difficulty that the nurses could force him to take the medicines. He died the second or third day after entering the hospital.

The fourth and last case of death was a man sixty-five years of age, the last years of whose life had been a continual debauch. He had had delirium tremens many times. He died nearly a month after entering, and with the symptoms of typhoid asthenia.

In all these cases, the bromides were used freely, with no unpleasant results. No bad effects were found to result from digitalis. In 1 grm. doses it exerted a wonderfully quieting effect upon the circulation, the heart promptly yielding to its influence by becoming slower and stronger.

Chloral hydrate was found to act more uniformly as a hypnotic in cases of insomnia from alcohol than its rather uncertain nature would have indicated.

Yet alarming symptoms occasionally supervened when 2 grm. doses were taken. Therefore, of late, doses greater than one gram had seldom been given. Chloral, when given at night, was usually given in one gram doses every half hour until three or four doses had been taken. When thus given it was beneficial and gave rise to no unpleasant effects. The value of chloral has been found to be secondary to that of digitalis or the bromides. It will be seen from these cases that there has been no "tapering off" on the supply of alcohol (as in those comparatively few cases in which it was given, it was given but for *one* day, which could hardly be called "tapering off").

The promptness with which these cases have yielded to this course of treatment, has been extremely gratifying, not only to the physicians, but also to the patients.

The majority of the patients, when entering, think they can hardly survive without "tapering off." Many and bitter are their complaints, but after the first day or two they cease to ask for liquors, and many have said afterward "that they never recovered from a debauch as quickly before."

The average duration of their time in the hospital has been nine days, but by eliminating five cases who, for other reasons remained from one to three months, it will cut this average down to seven days.

MERCY HOSPITAL, CHICAGO, Nov. 20, 1879.

AN interesting article on the action of pyrogallic acid in lesions of the skin and mucous membranes, from the pen of Dr. Rosa H. Engert, of this city, appears in the *Wiener Medizinische Wochenschrift*, Oct. 11, 1879, p. 1084.

Clinical Reports.

NOTES FROM HOSPITAL PRACTICE.

ARTICLE VIII.

Two Cases of Traumatic Tetanus.

I.—W. M., laborer; age 16; native of U. S.; was admitted to Cook County Hospital June 5th, 1879.

On admission, the patient gave the following history: His health had usually been good. In childhood, he had small-pox. One of his brothers is said to have died of tetanus.

Ten days previous to admission, he was kicked on the left side of the head by a horse. He did not lose consciousness, but, with the aid of a companion, walked to his home, a distance of 400 metres. Dr. E. W. Lee was called, who found an irregular, lacerated wound on the left side of the face. The wound was closed with interrupted needle sutures, and was dressed with a carbolic acid lotion. The needles were removed the third day. The wound did well, and everything was favorable, until June 1st, six days after the injury, when Dr. Lee saw him, and found no unfavorable symptoms. On the 31st day of May, it may be noted, there was a marked fall in the atmospheric temperature. To this may possibly be attributed some agency in bringing on the tetanus. Soon after Dr. Lee saw him on the 1st of June, the symptoms of tetanus began, with slight stiffness about the jaw, and slowly progressed until June 4th, when the patient came to Dr. Lee's office. He had then had some difficulty in swallowing for a day or two. Dr. Lee recognized symptoms of tetanus, and next day brought him to the hospital. When admitted, the patient was fairly nourished. He complained of stiffness of the muscles of the neck. He answered slowly and with difficulty to questions. When he attempted to speak, the muscles of the mouth were thrown into spasmodic action, the features assuming at times a true risus sardonicus. He could only separate his teeth about one centimeter, and swallowed with difficulty, in consequence of the spasmodic action of the muscles of deglutition. The circulation was rather feeble and the extremities were cold and bluish. The wound was in a healthy condition.

The patient was placed in bed and rendered comfortable. His temperature on admission was 36.6; pulse 84 per minute, and somewhat feeble.

A cathartic was at once given. He also received:

℞ Potassi bromidi.................................. 3 | 00
Chloral hydrates.................................. 1 | 00

every four hours. Good nourishment was given, in the form of milk, beef tea, etc. A record of the temperature was kept, which was:

June 6th.....................................P. 80, T. 36.3
6th, p. m.............................P. 76, T. 37
7th.....................................P. 72, T. 36.5
7th, p. m.............................P. 72, T. 37
8th, p. m.............................P. 76, T. 37.1
9th.....................................P. 88, T. 37

The stiffness of the muscles was constant, and slight spasms, affecting chiefly the muscles about the mouth and those of the neck, were excited upon attempting to speak or to swallow.

June 11th, he had an attack in which there occurred spasmodic closure of the mouth and spasm of the respiratory muscles, so that he became quite blue in the face. At the same time, there was bending back of the head and spasmodic action of the muscles of the back and extremities, producing slight opisthotonos. After the nurse pried open his mouth with a spoon, he breathed easier, and the spasm passed away. At noon of June 11th, he had another attack, exactly similar to the one just described. He passed the remainder of the day and night and the day of June 12th without any more serious symptoms than he had before the 11th. His temperature was normal, but his pulse was somewhat quickened. In the evening of the 12th, he had an attack more severe than any of the preceding. After this attack, 8 grams of bromide of potassium were at once given, followed by 2 gram doses every two hours. He was quiet during the night and slept some. On the next morning, he had a fourth attack.

As the case threatened to become very serious, the hypodermic injection of calabar bean was begun. The following solution was used:

℞	Ext. Physostigmatis		50
	Glycerinæ	8	00
	Aquæ ad..	32	00

M. Sig.—Inject 1 C. C. every two hours.

1 C. C. of this solution contains about 0.015 grams of the extract. The use of the bromide and chloral was also continued.

From this time, he improved considerably. No more paroxysms occurred. Although the calabar bean was used until there was considerable depression of the circulation, no contraction of the pupils occurred.

The wound healed rapidly, and he was discharged recovered on the 30th of June. His pulse was somewhat rapid after the violent attacks began, ranging from 96–124 per minute, but his temperature remained about normal.

II.—Of the second case I have not full notes, but the history, omitting dates, is briefly as follows. The patient, about a week before admission, received a crushing injury of the foot without any laceration of the skin.

About 36 hours before admission, he began to show signs of tetanus, and received a mixture of bromide of potassium and hydrate chloral.

After admission to the hospital, he received hourly 0.008 grams of the alcoholic extract of calabar bean by hypodermic injection, and 16 grams of whisky by the mouth, and once in two hours he received bromide of potassium 2 grams, and hydrate of chloral 1 gram. In addition, he had plenty of beef-tea and other nutriment. The paroxysms which amounted to slight opisthotonos, occurred once in half an hour, and at other times, in consequence of irritation. About 48 hours after admission, and eight hours before death, he began to have difficulty in swallowing, and some hebetude of mind. About an hour before death he had a somewhat severe paroxysm, followed by rapid breathing, rapid and feeble pulse, and unconsciousness. Tracheal rales were soon heard, and death occurred in about an hour. No more marked paroxysms occurred, but there was still some tonic spasm of the muscles shortly before death.

A most interesting question is suggested to me by these two cases, viz., what shall we take as evidence of the toxic effect of calabar bean poisoning in cases of tetanus?

In the first case, while symptoms of marked depression occurred, no contraction of the pupil was obtained. Was the depression due to the calabar bean?

In the second case, the manner of death was very curious. The spasms had not been severe and long continued enough to produce fatal exhaustion, and there were no signs of any considerable asphyxia. Could the cause of death in this case be calabar bean poisoning? If so, why did not relaxation of the muscles occur?

It is conceivable that in tetanus the activity of the spinal cord may be so increased, that an amount of calabar bean sufficient to paralyze the heart, may be insufficient to produce relaxation of the spasms.

G. H. SALISBURY.

TRI-STATE MEDICAL SOCIETY.—At the recent meeting of this Society, composed of members from Illinois, Indiana and Kentucky, Dr. H. B. Buck, of Springfield, was chosen president, and Louisville, Ky., selected as the place for holding the next annual meeting. The recent meeting at Evansville was well attended, and many interesting papers were read. The paper that will probably attract more attention than any other was read by Dr. Reuben A. Vance, of Cincinnati, on lithotrity.

SPECIALTIES of practice are one thing, and in the main, we think, undesirable; specialty in study is quite another matter.—*London Lancet.*

Society Reports.

ARTICLE IX.

CHICAGO MEDICAL SOCIETY. Meeting Nov. 3d, 1879. Dr. ANDREWS, President, in the chair.

Dr. L. H. MONTGOMERY reported a case of spina bifida and hydrocephalus, which had some interesting points.

The child was born Aug. 6th, and died Nov. 2nd, 1879. The spinal tumor was about the size of an orange, was in the lumbar region, and covered with a superficial ulcer, was indistinctly lobulated, and opened externally by a fistulous tract. At first it was quite elastic, especially with the child in an upright position; but when the child was laid in a horizontal position it was soft and flabby, becoming tense, however, when the child cried. There was no paraplegia for some weeks after birth. After the superficial ulceration had healed, under appropriate treatment, and the fistula closed, it was noticed that the head began to enlarge. Compression of the tumor below, caused the cranial walls to bulge, and pressure on the vertex caused the tumor to distend For some time the child appeared to thrive, but after a time the hydrocephalus became more and more marked, and the child finally succumbed to asthenia, dying at the eighty-fifth day.

In the discussion which followed, it appeared to be the general opinion that tapping and external pressure yielded the best results in the treatment of spina bifida.

MEETING NOV. 17th. Dr. ANDREWS in the chair.

Drs. FENGER and SALISBURY presented a communication on fatty embolism of the brain and lungs, following fracture. They reported a case which followed a fracture of the femur in a middle-aged woman, and Dr. Fenger exhibited a number of sections under the microscope, giving evidence of the lesion. The paper gave a general résumé of the subject, and will appear in the JOURNAL AND EXAMINER.

Dr. R. PARK related a case of sudden coma, with fatal termination, a comparatively short time after operation for caries of the tarsus, which he thought was most rationally accounted for on supposition that there had been a fatty infarction in the lungs, with consequent anæmia of the brain, the symptoms corresponding well with those described in the paper.

CATGUT DRAINAGE. By Jules Boeckel. (*Revue Méd. de l'Est*, June 1, 1879.)

Dr. Jules Boeckel, having used the catgut drainage in a number of capital operations, insists that it can be employed with advantage over the ordinary rubber drainage tube. He used nine catgut threads, the ninth being wound round the eight to keep them together, the two ends being fastened together by a piece of silk. In every case reported, the catgut used as drainage became absorbed after about the sixth day. The catgut, he claims, affords sufficient drainage; it does not act as a foreign body as it is readily absorbed; it does not require the attention which the ordinary rubber tube does; and the separation of the tissues is reduced to a minimum. Theoretically, he says one single catgut thread should be sufficient. Another advantage claimed for it is that compression can be made to any extent so as to bring the deeper parts in close apposition without fear of obstructing the drainage.

WE join the *Southern Clinic* and the *Louisville Medical News* in asking the question, Who is or was Dr. F. A. Ticknor, of Columbus, the author of "Little Giffen, of Tennessee." The poem is worthy to be ranked with some of those from the pen of another member of the profession, Dr. O. W. Holmes.

Domestic Correspondence.

Article X.

Editors Chicago Medical Journal and Examiner :

Quite a number of New York medical men spent their summer vacations abroad, taking advantage in this way of the several medical congresses which met at Cork, Amsterdam, and Montpellier. No one made a more triumphal progress, or came back with more honors than did Dr. Sayre. With his plaster of Paris bandages, his suspension apparatus, and his son Charley, he straightened out the crooked, raised the bed-ridden, and captured all his audiences. There was a little coldness, to be sure, amongst Parisian surgeons ; and an English medical man wrote something, based upon a hundred cases, that was scarcely favorable to our countryman or his jacket. This, however, was nothing compared to the overwhelming tide of enthusiasm which met the eminent doctor almost everywhere. Dr. Sayre is certainly a remarkable man, and has already had a distinguished career. With study, common sonse, and an impetuous energy in asserting his beliefs, he has ridden to fame upon one pathological idea and two therapeutical principles. The supremacy of traumatism over scrofula, the necessity of rest, and the importance of extension, are the ideas which have controlled his surgical opinions and methods, and by the vehement utterance of which he won his reputation. There have been, of course, certain minor things, such as reflex action and the prepuce, which have broadened as it were, his views, and ornamented with lighter touches his career. The qualities of his character are strongly marked and easily seen. He has excellent judgment, a practical rather than studious mind, and much mechanical skill. His quick appreciation of what is valuable in therapeutical appliances, is much greater than his own inventiveness. He appropriates more than he originates (unless we except his style of expression). But he champions what is good, and generally proves to others his correctness. Dr. Sayre's reliability has sometimes been called in question. His success is said to be too uniformly remarkable.

There is probably no doubt that in the eloquence of his clinical expositions, or in the heat of his spirited objurgations, he sometimes wanders from the hackneyed limits of the actual (I hope I have put the thing mildly enough). The true story of clinical cases is often embarrassing to any clinical teacher who wishes to present a disease in all its classical and rotund completeness. And if a man receives from doting mothers three letters full of gratitude and terms of effusive endearment, he is apt to think that there have been six. Cases whose hospital record is "discharged cured," will come back sometimes with a terrible limp and pain in the hip. It is rumored, indeed, in the orthopedic wards of Bellevue Hospital, that hip-joint disease never is cured with any satisfactory result; and this expresses a considerable amount of truth.

However, inaccuracies of statement often imply only a superabundant enthusiasm and have no further moral significance. No one can deny that Dr. Sayre has done work which justly entitles him to the highest honors of the profession as well as the gratitude of his fellow men. I should not omit to mention that no one, however poor, is ever turned from his office and that the amount of private charity thus dispensed is very great indeed.

The New York medical colleges have opened with their usual quota of students. Bellevue Hospital Medical College, as is now well known, has announced a change in its course. After the present session it will be graded; annual examinations and three years attendance upon lectures will be required.

It requires much courage for a school like that of Bellevue to make such a change, and great credit is due the faculty, both on this account and because its example is so conspicuous that the other city colleges cannot avoid eventually following it. There is a great cry just now for higher medical education and the colleges are beginning to show that they feel it. It is absurd to expect that every medical graduate shall be a gentleman of wide accomplishments and elegant culture, but there are just now two evils which we have to face: a great surplus of young graduates and a great deficiency of education both general and professional amongst them. Medical colleges should be made to remember this and shape their course accordingly. As they will only do it partially, however, we must rely on the law of supply and demand to settle the question eventually.

At a meeting of the County Medical Society last spring, a paper on laryngeal phthisis was read by Dr. Bosworth, in which he announced the possibility of its cure. In the discussion of the subject afterwards, a number of prominent laryngologists took part, and turned the question finally to the propriety of performing tracheotomy in the disease. No one was positively in its favor, but a number of cases tending to show that it was justifiable and even imperative were quoted. Since then several other cases have been brought to my notice. One of these, operated on by Dr. Oppenheimer, of the New York Eye and Ear Infirmary, seemed to show the operation to be absolutely curative in its effect. Two others gave much relief to the patients. From cases of which I have had a more personal knowledge, however, it has seemed to me that the good results of this operation are much exaggerated, and I believe that the growing feeling in its favor is a dangerous one. It is liable to give the patient a shock from which he does not rally. It introduces air directly, unsifted and cold, upon bronchial mucous membrane. It gives the patient a great deal of annoyance, and is generally thought to be a terrible thing by the friends. But more than all, it makes expectoration difficult, and the muco-pus accumulates in the cavities of the lungs, to the discomfort and injury of the patient. I don't believe that the operation should ever be done, unless the indication to secure euthanasia is very strong.

You have, I hear, a very active health board in Chicago. Ours of this city has been boasting of what it has accomplished, during the present summer, in the way of saving children's lives. By its system of tenement-house inspection, by sea-side and country sanitaria, by water excursions and land excursions, a great deal of fresh air during the summer has been introduced into the lungs and system of the rising generation. In 1875, the deaths from diarrhœal diseases, mainly amongst children, were 2,997; in 1876 they were 3,060; in 1877, when sanitary measures began, they were 2,657; in 1878, about 2,052; and in 1879, about 2,084. Thus there has been a decrease of nearly a thousand deaths amongst the children, with a corresponding diminution in the sickness rate. So much for sanitary science. It should be remembered, however, that a great deal of this is due to private charity, and that the health board was only one of the agents. Just now, sanitary science and State medicine are "booming," and enthusiastic men are beginning to give us to understand that if they will only be allowed full swing, sickness will be abolished and society become immortal. This sounds very nice, but it will be terrible for the doctors. We can encourage hygiene until it has reduced the mortality to fourteen or fifteen per thousand. The medical profession must then join anti-sewerage and anti-vaccination societies, and become the deadly enemy of sanitary progress. What would medicine be without typhoid-fever, or if the *bacillus malariæ* were forever exterminated? C. L. D.

ARTICLE XI.

GELATINE SUPPOSITORIES.

MESSRS. EDITORS:—Permit me to enquire through your pages whether physicians have often obtained satisfactory results from the use of suppositories prepared with gelatine. In two cases where I used them, they failed to dissolve. In one of these cases the suppository remained in the rectum one hour, and in the other all night, without any appreciable alteration in size and form. E. F. I.

DR. E. S. GAILLARD, editor of the *Richmond and Louisville Medical Journal* and of the *American Medical Bi-Weekly*, has removed to New York, and taken his journals with him.

Reviews and Book Notices.

ARTICLE XII.—CONSPECTUS OF ORGANIC MATERIA MEDICA AND PHARMACAL BOTANY. By L. E. Sayre, PH.G.

This work reminds one of the statement of Prof. Huxley, that if he had power he should cut out ruthlessly botany and materia medica from the course in a medical college. The book contains just that portion of materia medica which Prof. Huxley declared he would cut out, viz., "a knowledge of drugs and what they come from, and the animals and plants that yield them." Certainly, when we consider the short period devoted to medical education, and the vast number of facts which need to be learned about the physiological and therapeutical action of remedies, there is no time for the medical student to spend upon botany or upon the physical properties of drugs, except so far as they have some application to the art of healing. For the pharmacist, the book has undoubtedly a useful place to fill. J. H. S.

ARTICLE XIII.—THERAPEUTICS, MATERIA MEDICA AND TOXICOLOGY. H. C. Wood. Third edition.

This work has obtained an acknowledged place as the most complete work on the physiological action of remedies, in the English language. The value of the work to the practical student would be much increased by adding to the discussion of the physiological action of every remedy a summary similar to that which follows the account of the action of digitalis on the heart. The third edition contains some new articles, and other articles have been re-written to keep pace with the progress of science. The size of the volume is increased by about fifty pages.

J. H. S.

ARTICLE XIV.—FIRST STEP IN CHEMICAL PRINCIPLES. By Henry Leffmann, M.D., Lecturer on Toxicology in the Summer School of Jefferson Medical College.

In a small book of fifty-one pages, the author has given a succinct statement and careful explanation of the principles of chemical nomenclature, notation and the working out of reactions. To understand and remember a chemical formula, and to write a chemical reaction, are frequently very difficult for beginners in chemistry, and the ingenuity of the teacher is often severely tasked to explain the principles involved. This book will doubtless prove a help to both teacher and pupil. J. H. S.

ARTICLE XV.—CHEMISTRY, GENERAL, MEDICAL AND PHARMACEUTICAL. Attfield. Eighth edition.

This work is an extremely useful book of reference for the practitioner, containing the whole of the chemistry of the pharmacopeias of the United States, Great Britain and India, and is, at the same time, the best laboratory guide for medical students. The eighth edition contains new matter, which is represented in the index by three hundred new references, and increases the size of the work by twenty-three pages. J. H. S.

ARTICLE XVI.—GUIDE TO THE EXAMINATION OF URINE, With Special Reference to the Diseases of the Urinary Organs. By K. B. Hoffman, Professor at the University of Gray, and R. Ultzmann, Docent at the University of Vienna. From the second edition. Translated and edited by F. Forcheimer, M.D., Professor of Medical Chemistry at the Medical College of Ohio, Cincinnati.

The ideal of a work on urinalysis, for the practical physician, has not yet been reached. We have several exhaustive works, but what the physician needs is a work which shall give him a clear exposition of the methods which he can use in daily practice. Especially is this the case with quantitative determinations. Very few physicians have the time or skill to use gravimetric or even exact volumetric methods of analysis. At the same time, it is possible for them, and also convenient, to apply certain approximative methods which, although not strictly accurate, are sufficiently so, for application to chemical investigations. These methods are almost entirely omitted by the work before us, while exact gravimetric and volumetric processes are given. This does not justify the statement in the preface that "every test, every method, is brought home to the student and physician for use in practice." The work seems to be well translated, and is a very readable book. The addition of a few simple tests, to supply the deficiencies above mentioned, would make it an excellent work. J. H. S.

ARTICLE XVII.—HYGIENE AND PUBLIC HEALTH. Edited by Albert H. Buck, M.D. New York: William Wood & Co. Two volumes. Octavo.

These two volumes form a work which will be welcomed by a large and increasing class of men. To the pin-feathered sanitarian, picking up his first crumb at the public crib, it will prove a friend in need — a friend indeed. By the student of nature, who delights in patient search for the ultimate causes of phenomena, it will be cordially received as a contribution towards the advancement of science. It will be esteemed by the philosopher as a mile-stone on the pathway of progress. Whatever may be said of its contents, it cannot be denied that it is an epoch-making book and its influence will be far-reaching and long continued. Fortunately, therefore, it is a work which in the main deserves commendation. Formed, as it is, by a series of unconnected essays, which have been prepared by different authors, treating of a great variety of subjects, there is, necessarily, great inequality of value in the different sections of the book. Certain topics seem to have been too lightly touched, while others have been elaborated out of proportion. Still, every part is instructive, if incomplete; and suggestive, if inaccurate.

The introduction forms an array of sixty-three pages, by the well-known Dr. J. S. Billings. It is a very readable paper, quite free from the extravagances which characterize those sanitary enthusiasts whose effusions provoke the inextinguishable laughter of gods and men. In fact, the doctor does good service in calling attention to the errors of judgment and of prevision into which such people continually fall, to the great detriment of the good name of sanitary science. He clearly shows the unwisdom of expecting too much from public sanitation and points out with great clearness the difficulties—pecuniary and the like—with which communities have to contend when they undertake the work of sanitary improvement. He specifies, also, the fact — too often overlooked — that the health and longevity of the members of a given community cannot be greatly affected by improvement of its sanitary condition. It is true that the introduction of pure water or the construction of extensive drainage works will, at first, in unhealthy locations, produce a very considerable reduction of the local death-rate. But this is only temporary. In a short time new causes become operative to a degree that compensates for the removal of the old; and something near the former rate becomes established. If, by vaccination, you diminish the mortality from small-pox, you soon have an increase from scrofulous diseases. If the mortality from infectious fevers decreases, the deaths caused by violence, by accident, by intemperance and vice increase. Suppress disease; old age and starvation will soon fill up the contingent of death. This necessary consequence of the co-relation of forces is too much ignored by our sanitary friends. It has not escaped the notice of statisticians who are concerned with life insurance. They declare that, during the past forty years, in which sanitary science has figured so largely in England, the death-rate has remained unchanged. This, however, need not discourage our efforts in behalf of improvement, for, if we may not hope for a longer average duration of life, we may at least hope to live more agreeably. The majority of young women would prefer to die of consumption rather than to live adorned with the scars of small-pox; and even if an epidemic of cholera does not enlarge the aggregate of mortality, pure water is a comfort that may not be despised. It is, certainly, more respectable to die of pneumonia than of yellow fever. Quite unnecessary, therefore, is the effort which writers are recently putting forth, in view of the above-mentioned statistical fact, to show that even a stationary death-rate is owing to sanitary measures and is, therefore, a positive gain to the cause of public health. This sounds wonderfully like the common professional plea, that, although the patient had not recovered his health, he certainly would have died if it had not been for the doctor's medicine. The fact is simply this: an equilibrium between the forces that maintain life and the forces which tend to death has, during the last forty years, been established and maintained in England. Such an equilibrium tendency is a law of nature everywhere and it is impossible for the human will to effect any great or permanent alteration of that equilibrium. A new sanitary superintendent, a general civic cleansing, an improved water supply, the cessation of a world epidemic, may affect the equation for a brief period, just as a conjunction of the outer planets may, for a few months, deflect the pathway of the earth around the sun; but the general course and result of forces is, in the long run, the same. And, as in the universe there are vast and varied forces, which produce slow and cyclical changes among the heavenly bodies, such as are implied by the changes which have taken place upon the earth during the lapse of geological time, so the public health is subject to vicissitudes of equilibrium which require centuries for their evolution and which are quite beyond the control of human will. For example, a review of the social history of the race shows that in Europe, for many generations, long before hygiene was ever thought of, the public health has been rising, the average duration of life has been growing, even in communities where social conditions and habits had undergone no change other than the natural outcome of increasing intelligence, morality and civilization. These are the great agents of improvement and to them must be ascribed the amelioration of the condition of the masses in Europe which has taken place during the past three hundred years. Stringent sanitary legislation, "shot-gun" quarantine, placards on houses, official inspection and supervision, in short, all the horrors of barbarous despotism, were utterly unavailing against the leprosies and pestilences of antiquity. It was the sun of civilization, opening to view the waste places of the earth and revealing space and liberty, stores of food and unheard-of comfort for the half-starved serfs of mediæval Europe, that banished leprosy and the plague from that quarter of the earth. It was the entrance of mankind upon that ample career which was opened by the discovery of America that accomplished results which the combined authority of law and religion could never effect. If history teaches anything, it teaches the lesson that public health depends not upon the existence of a learned and privileged class who shall govern men in such a way as to make them healthy. That method has been sufficiently tried and has failed. Public health depends rather upon the universal diffusion of knowledge and of wealth sufficient to put that knowledge into practice. As a community grows in wealth and intelligence, that is, as it becomes emancipated and free from the dominion of even a benevolent despotism, so will rise its standard of health and comfort. The highest aim, therefore, of the philanthropic sanitarian should be the diffusion of knowledge and the general distribution of property. Everything else will follow as a matter of course. By this method, only, can success be attained; but it is exceedingly difficult to get ordinary men to trust in the operation of the natural laws of the universe. Even a thinker ordinarily as clear-headed as Dr. Billings cannot always rise above the official bias due to his position, as appears from his utterance regarding small-pox (p. 8.) to the effect "that it should never appear on the death register; yet, to obtain such an universal and satisfactory vaccination and revaccination of each individual as will give this security, there is necessary the decided and persistent interference of government to an extent which has not yet been provided in this country except in a few limited localities." Now in England and on the continent of Europe, the government does interfere to secure the vaccination of everybody; but with what success, the history of the frequent local epidemics of small-pox abundantly shows. Our own experience in this country, where compulsory vaccination is not practiced is at least as favorable as the result of paternal government. And in countries where the compulsory method is in vogue, there is always an angry resistance manifesting itself against the law, which maintains the prejudices of the ignorant against the practice. Witness the English anti-vaccination leagues and literature. The best safeguard against the spread of small-pox is an occasional outbreak of the disease. Compulsory legislation can accomplish nothing better.

The official bias of the author again shows itself, in the very cursory manner with which he dismisses the matter of personal hygiene — (pp. 11, 12). This, by far the most important factor in the work of advancing the public health, seems to have very few attractions for the professional sanitarian, probably because it must be exercised in a sphere beyond the reach of public officials. It is, however, the agent which has effected the greatest part of the physical improvement of the human race; and to the diffusion of the knowledge upon which it depends must we look for all real progress in the future. Such diffusion will accomplish all, and more than all, the good results that might be expected from working "in accordance with the laws of natural selection, [to] prevent the reproduction of weak and unhealthy persons." It is indeed true that the immense results which are possible in this department of effort "must be effected by parents and teachers; by guiding the children under their charge into proper mental and physical habits."

The second chapter of the introduction is devoted to the "Causes of Disease." These the author divides into four classes: 1st, hereditary: 2d, physical and chemical; 3d, organized or vital; 4th, mental or emotional. Of these the first is considered as belonging chiefly to the unavoidable causes of disease. The second class is left for discussion in the special sections of the work. The fourth class is considered too large and difficult for discussion in a manual like the present. "The third class of cases (p. 13), viz., those which are known or supposed to be organized or vital in character, is the most important of all in public hygiene, and hence we shall dwell upon it a little." About twenty pages, accordingly, are devoted to a brief, but lucid summary of recent literature on this subject. The author adopts the German classification into:

A. Parasitic diseases.
B. Contagium diseases.
C. Miasmatico-contagium diseases.
D. Miasmatic diseases.

That certain diseases, such as scabies and trichinosis, are purely parasitic is beyond a doubt. That certain diseases may be propagated by the transfer of material particles from the body of a diseased person to the body of a healthy individual is also beyond a doubt. That certain diseases are produced by a similar exchange between certain soils and living bodies will not be questioned. The only debate arises over the nature of such transferable particles. Are they organized, living germs, or are they particles of non-living, decomposing organic matter? That is the question. Dr. Billings criticises very freely the extravagancies and the confusion of ideas which are the principal characteristics of the advocates of the so called "germ-theory." He also very wisely condemns the notion which some have advanced, to the effect that it is a matter of no consequence, so far as sanitary administration is concerned, whether the germ-theory be right or wrong. It is a matter of great importance, for if the germ-theory, as ordinarily preached, is incorrect, then much that is now considered of prime importance in sanitary administration will sink into insignificance in comparison with personal hygiene.

As just now remarked, there is no question as to the dependence of certain diseases upon the invasion of the tissues by certain parasites. But regarding certain other diseases there is still an active controversy. Are diphtheria, splenic fever, relapsing fever, hog-plague and the like diseases to be ranked as idiopathic, endogenetic diseases, or are they to be always charged to the entry of infective spores into the blood? Dr. Billings inclines toward the latter view of the subject, evidently almost persuaded by the clamor of Pasteur and the microscopists of his school; but the doctrine of these observers does not account for the existence of cases of splenic fever without the presence of bacteria, as reported by P. Bert, Joffroy, Hayem, Trosbot and others. Pasteur, it is true, denies the name of splenic fever to such cases, calling them cases of septicæmia; but his evasions and his failures to demonstrate in puerperal fever the parasite which he had announced as the infective agent, along with his unsatisfactory notions regarding the relation of microphytes to the processes of fermentation and putrefaction, render one very slow to accept as an established fact the parasitic theory of these diseases. The same thing may be said of the experiments by cultivation and inoculation as practiced by Koch and by Klein. They cultivated successive generations of poisonous bacteria and succeeded in producing splenic fever by inocculating animals with nine or ten consecutive crops of the parasite. This certainly indicates a power on the part of the bacteria, to produce a substance poisonous to the inoculated animal, but it does not prove that the original source of the poison resided in bacterial germs. It is acknowledged that the harmless bacteria subtilis and the poisonous bacteria anthracis are, for all practical purposes, morphologically identical. Now the real question is this: Are bacteria anthracis anything more than the ordinary bacteria subtilis undergoing a process of disease, resulting from immersion in the liquids of a specifically diseased animal. We know that the form, and modes of growth of parasitic microphytes may be varied almost beyond description by alterations of the fluids in which they are developed. If now, a family of bacteria are infected by the disease of their host, it would not be at all singular if they should transmit a hereditary disease to their offspring during the process of "cultivation." But, inasmuch as hereditary diseases tend to self elimination, it is necessary, in order to decide the question at issue, to pursue the method of cultivation and inoculation with successive generations to far greater length than has yet been done. Nine or ten generations might very well be insufficient to give opportunity for reversion to a healthy ancestral type, when, perhaps, a hundred successions might exhibit the process in the clearest manner. Until some such crucial test shall have been applied, we must side with Billroth in the opinion that these microphytes may be the carriers, but not the original sources of the infective virus. In fact, it is only by continually keeping in mind the broad generalizations of Liebig as expressed in his doctrine of fermentation, that it is possible to reconcile the conflicting hypotheses of different writers, and to clear the doctrine of infection of all the rubbish that has been heaped about it by one-eyed microscopists. Great confusion has arisen out of the failure to distinguish sharply between organized bodies and their products. A very large proportion of the advocates of the germ theory seem to make no distinction between the properties of organized matter and of organic matter—between a living cell and its excretion; consequently we find such writers making no distinction between the activities of these very different entities. Because a cell may multiply itself by fission or otherwise, they seem to think that the waste products thrown off by a cell may multiply themselves indefinitely in a similar manner; but we know how cells multiply themselves, and we know something of the way in which defected, non-living organic matter behaves itself. The numerous ferments which are elaborated by specialized cells of the body, though non-living, are exceedingly potent — even after all connection with the generative cell has long ceased — to effect change in protoplasmic matter, both outside of the cell, as in the process of peptic digestion, or inside of the cell, as when splenic ferment reaches and modifies the function of pancreatic cells. In all such cases the active ferment operates by exchange of molecular motion, and the ferment is reproduced, not by any generative process, but by the continued life and modification of cells whose activity is sustained by the remote consequences of the action of the ferments which they have produced. The same process goes on with new forms of intensity in certain diseases. The cells of a variolous patient produced small pox virus. That virus invades the blood of a healthy subject; it modifies the nutrition of every cell in his body until they too yield a virus which exactly resembles the first. A cow becomes plethoric, and develops splenic fever. The morbid cells of her tissues excrete a poisonous virus which pervades all the liquids of the body, and even infects the bacteria which soon swarm among the non-resistent tissues. Microphyte and microzoon (animal cell) then alike produce the poison and discharge it into the blood and lymphs of the animal until everything connected with the victim is alike infectious. In a similar manner the contagium of scarlet fever and of kindred diseases may be supposed to originate and to be multiplied. In cholera and yellow-fever it is possible that these non-living cell-excreta may need a farther change outside of the body before their full power for evil can be developed. Viewing the subject in this way, we can reconcile the doctrines of Liebig and of Pasteur, and can obtain a much clearer nōtion of the manner in which infective diseases may originate and are propagated, than if we adopt the so called "germ theory" with all its visionary outfit of invisible spores and parasites too small for sight, yet large enough to drain a fever-patient of his fluids till he must cry continually for water to make good the loss!

The necessary limits of a review like the present render it impossible to elucidate this subject. We can only throw out these few hints which may suggest thought to the initiated, but which, of course, can convey no intelligible idea to those who are destitute of scientific training. The whole search for "germs," as conducted by the majority of the microscopists who are continually cackling over new found forms of morbid growth in the blood of all manner of patients, affords a striking illustration of the ease with which one may fail to discover the simplest thing for which he has not been trained to look. In their eagerness after bacteria they have quite neglected the cells of the body which in the vast majority of diseases, if not in every instance, are the seat of the essential morbid processes, and the sources of infective matters which are discharged into the liquids of the body. This being the fact, a little thought will enable one to see how much more important are measures which tend to sustain the vitality and the normal function of the cells of the tissues than any simple attempt to keep bacteria away from the person. In other words, the personal hygiene and therapeutics, which some of our enthusiasts are so disposed to undervalue, are of far greater importance than any process of quarantine against "germs." Dr. Ezra M. Hunt is almost the only recent American sanitary author who seems disposed to give rightful prominence to this branch of hygiene; and yet it is the principle which underlies such measures as vaccination and all our rational therapeutics. Once possessed by a comprehension of this great truth, it will no longer be living matter, but dead, decomposing matter, which we shall seek to avoid. We shall think less of antiseptics and more of abundant oxygen.

The third section of the introduction treats of the "Jurisprudence of Hygiene." This is, perhaps, in some respects, the least satisfactory portion of the paper, for the very sufficient reason that sanitary legislation is yet in its infancy; and, having been, so far, for the most part, dictated by half-educated enthusiasts, and interpreted by lawyers and judges who are more or less under their influence, there is yet no complete and final adjustment of the subject upon a basis of true science and sound philosophy. One of the very first propositions with which our author starts, viz., that it is necessary in this generation to establish public hygiene upon the foundation of utilitarianism (p. 35), is a very good example of the narrow philosophy which guides our sanitarians. *Expediency* and *utility* may be allowed to suggest motives to the common herd, but the highly-gifted few — the benevolent despots whom we are advised to set up over ourselves — must act upon a higher level than is furnished by these narrow motives, if they wish to reconcile us to their dominion. They must ask what is in conformity with the known laws of the universe — what is *right* and what is *wrong* — if they wish to secure a wide and lasting influence with the public. This is where so much of our sanitary administration is weak. It busies itself too much with the utilities; and utility, for the average sanitary official, too often relates merely to the bearing of particular measures upon his chances for keeping his hand in the public treasury. But this is not all. As President Woolsey (p. 36) and Herbert Spencer, and numerous other writers upon the philosophy of government, have clearly shown, the whole matter of sanitary legislation for the benefit of the public health is muddled by the attempt to accomplish with the same machinery of government and taxation two things which cannot thus be confused without injustice. As Bastiat says: "The government cannot organize labor and education and public health and charity and such things without disorganizing justice." It is the duty of the government to provide uniform protection for the lives, liberties and property of all its citizens, and consequently it is the duty of the government to tax its subjects with perfect uniformity. Each citizen should pay the same amount for the police protection of his life and liberty that every other citizen pays. For the protection of his property each one should pay according to the value of that property. If it costs ten dollars to protect the lives of A and B, then A and B should pay five dollars each. If it costs one hundred dollars to protect their houses and other property, and if A owns nine-tenths of that property, then his just proportion of the total tax for person and for property is ninety-five dollars, while B should contribute but fifteen. That is the just way to raise money for the support of government. But when it is proposed to tax people for the protection of their health, it becomes impossible to adjust such a tax with anything like uniformity, and it becomes an unjust tax, because bearing with the utmost inequality upon individual citizens. Because Mr. Smith is rich, and chooses to use his income in such a way as to preserve the health of himself and his family, it is no reason why he should be taxed to also pay for the improvement and supervision of the families of poor Harry and drunken Dick. Benevolence is no legitimate part of the function of civil government. All governments undertake to dispense more or less of compulsory charity — a hereditary custom derived from the despotic ancestors of existing governments — but it is a practice fraught with evils, and is the parent of dangers to which we in this favored land have not yet opened our eyes. Benevolence is the duty of private individuals; protection of life, liberty and property is the only proper function of government. Consequently, the care of the poor, the ministration to the sick, and the elevation of the downcast, should be left to private enterprise. Whenever it can be shown that a particular measure interests the welfare of all alike, it will then be proper to levy the cost of the undertaking upon all. Such a measure is the supply of pure water to every inhabitant of a city, where the natural sources are deleterious. Such a measure is the maintenance of quarantine against those foreign pestilences which can be kept out by such expedients. Such a measure is the cleaning of the streets and the privies, which all must use. But the attempt to protect citizens at the common expense against their local endemic diseases does not belong in this category, for the reasons previously given. That is the field for personal, individual responsibility, effort and expense. This is the position taken by the highest philosophy, and Dr. Billings would have done better for his own reputation if he had sided with Woolsey and Spencer. Had he done so, he would not have fallen into the inconsistency which he manifests, in common with the majority of sanitarians, when he argues (p. 35) that because health is part of a man's capital, it must be protected by the government, for the reason that the State undertakes to protect all property. We will admit that health is a valuable possession, and that it should be protected just like all other property. Now the way a just government treats property is not by managing it for the benefit of its owners, but by providing equal security to all in the possession and use of their valuables. That done, every man is free to use his property as he pleases. He may give it away, or destroy it, or increase it, and no man shall interfere. In like manner the health of every man is his own property, and it is a possession of equal value to every man. Consequently, no government has any right to dictate, as our sanitarians desire, how a man shall use or abuse his health, nor has it any right to tax one man more than another for the protection of the collective health of the community.

It really seems almost a waste of time to dwell with such minuteness upon these elementary propositions; but the fact that a writer of such ability as Dr. Billings has failed to perceive their bearing, shows how much our sanitarians have to learn from philosophical thinkers and teachers, even though they be as obscure and unknown as President Woolsey, or Herbert Spencer, or John Stuart Mill. However, the public does not propose to be coerced by philosophers or by sanitary experts; consequently it is useless for either class to attempt the forcible realization of their opinions in practice. The only thing that can properly be done is to insist upon a conscientious presentation of the highest truths in science and in philosophy by those who devote their lives to research; for we may be confident that the advanced science and philosophy of to-day will supply the common creed of to-morrow. Every attempt to interfere with the orderly evolution of nature in these respects will only hinder progress, and will recoil injuriously upon its authors.

Passing to a consideration of the legal relations of physicians to the public in the matter of statistical returns, and registration of diseases, it is pleasing to find our author ranging himself on the side of justice in his affirmation of the obligation of the State to pay for all such service. The experience of New Hampshire, Connecticut and Minnesota, and of British cities which have undertaken a registration of infectious diseases, does not, however, reveal any practical difficulties in the way of fairly compen sating physicians and others for their assistance in the matter. The only difficulty that can interfere grows out of the immoral unwillingness of so many people to pay for work which they desire to have done. In this disposition, it is to be regretted, that communities are too often encouraged by political doctors who hope to magnify their own importance by the unremunerated services of their non-official brethren, and by certain enthusiasts, bitten with a mania for statistics, for the sake of which they are willing to sacrifice honor, justice and everything else. In this connection it is noteworthy that the official bias of our author has in some degree overcome his usually candid disposition, a fact which is shown by his absurd notions (p. 46) that the compensation of physicians for services to the State "should be indirect, in the shape of certain privileges," such as "a voice in the selection of the health official or officials with whom they are to co-operate, or, some permanent and organized means of representation in the councils of the sanitary authority." In reply to this it is sufficient to remark that in this State, at least, the organic law expressly forbids the creation of any privileged class whatever. As for voice in the selection of the health officials, that is too unsubstantial a privilege to excite anything but laughter among the initiated, and as for representation in the sanitary councils, that is too empty and impracticable a consideration to be esteemed by any but the official classes. The vast majority of physicians are plain men who practice medicine, not for the sake of science, or for political influence, but for the sake of the shekels which they may thus honestly earn, and nothing else has any tangible value as a compensation for their labor. No lawyer would ever think of giving his services as a notary public for the privilege which he already possesses of voting at the primaries, or for the chances of some day becoming a judge. A voice in the selection of health officials and a representation in sanitary councils is already the property of the medical profession, and its value cannot be increased by any mere legal formula.

The concluding portion of the paper treats chiefly of the proper functions of the boards of health. The author admits that the legislation necessary for their establishment and guidance presents great difficulties. There is danger, he thinks, of conferring too much power by vague legislation and there is danger of too much prolixity and rigidity if the health laws are made specific in their provisions. These difficulties are greatly over-rated by sanitary writers. They grow out of ignorance of the legitimate functions and limitations of government. The practical difficulties are largely caused by the hereditary inclination of legislators and public officials to intrude their supervision and authority into the private life of citizens. It was once thought right for the state to govern the consciences of men in all matters pertaining to religion. This primitive notion we have nearly outgrown; but the analogous superstition that the state must take charge of the health of its citizens, is exceedingly fashionable and will always be so while money and political position can be made by such work. When our legislators become willing to listen to the teaching of those philosophers who, like Herbert Spencer believe in a moral order as the basis of civil government, we shall not find it so difficult to secure sanitary legislation which will be simple and comprehensive alike. In this connection it is encouraging to note the action of the supreme court of Massachusetts, by which the right of trial by jury has been restored to the citizens of that State in cases of appeal from the decisions of the State board of health. The authority which had been thoughtlessly conferred virtually upon the secretary of the board, making him the supreme arbiter of the most important interests, was an act so completely opposed to the fundamental principles of free government that its abrogation by the supreme court should really be a matter of national thanksgiving.

The recent legislation, establishing a State board of health in Illinois and the national board of health in Washington, is duly noticed by the author. Our own State is credited with the possession of the most potent board in the country so far as its theoretical powers and privileges are concerned. As for their practical working, Dr. Billings shrewdly and correctly remarks that "among observant sanitarians there is a fear that if matters take the usual course, there will be a reaction and that the description of the course of public hygiene in England—viz., that it has consisted in taking three steps forward and two backward, will also apply here" (p. 57). Mere sanitarians may "fear" such a consummation but it will have no terrors for the thoroughly scientific observer, for such is the universal law of all rational human progress. Enthusiasts rush wildly in advance, throwing out a disorderly skirmish line, behind which the cool-headed generals select an impregnable position to which all must retire when night puts an end to the combat.

With these remarks we must leave this very able paper, which, though perhaps not in all respects fully up to the high water mark of science and philosophy, will, if read with discrimination do a great deal of good.

After the introduction, the first paper is devoted to the subject of "Infant Hygiene." It is sufficient praise of this essay to note the fact that it is the work of Prof. A. Jacobi, the well-known writer and teacher and repository of all that is known about the care of children.

"Food and Drink," is the title of the next paper. It is written by Prof. James Tyson, of the University of Pennsylvania, and it forms an excellent summary of the teachings of physiology in this department.

Prof. Wm. R. Nichols, of Boston, Mass., writes on "Drinking Water and Public Water Supplies." This forms a valuable exhibition of what is known concerning the different kinds and sources of water that are used in different parts of the world. The subject of impurities and means of purification is very sensibly treated. The presence of microscopical forms of plant and animal life is not considered especially objectionable. The deleterious effects of sewage and other artificial causes of pollution seem to depend upon the degree of concentration rather than upon the quality of the impurity. As for the presence of specific "germs" of disease in water, the professor does not adopt any particular theory. He simply and correctly states that the weight of opinion inclines to the view that decomposing nitrogenous matter of organic origin is the most dangerous form of injurious matter. This, when derived directly from diseased bodies is, of course, the most concentrated and most virulent. When it has infected algous or fungous growths, they may also become capable of discharging virulent matters like those by which they were originally diseased. In this way such minute organisms may become associated with the propagation of diseases dependent upon decomposition of specific organic matters which they did not primarily originate.

A paper on "Physical Exercise," is contributed by A. Brayton Ball, M.D., of New York. This is also a concise and useful summary of the physiology and pathology of muscular motion.

Arthur Van Harlingen, M.D., an eminent dermatologist, in Philadelphia, contributes a brief essay on "The Care of the Person." All very good. He advocates the establishment of public baths in our cities — a very desirable thing; but he neglects to remark that such luxuries should be provided by charitably-disposed citizens rather than by public taxation.

The great subject of "Soil and Water" is treated at length by Wm. H. Ford, M.D., of Philadelphia. The whole matter of sewerage is fully considered. Contamination of the soil by privies, and the remedies, are also passed in review. The author writes very sensibly of the relation which exists between certain diseases and certain conditions of the soil, air and water. The upshot of the immense number of observations and opinions which he has collected, but only partially analyzed, is not at all favorable to the so-called "germ theory." Nor can it be otherwise, for the only living germs concerned are the cells of the body. When inundated soils containing protoplasmic matter — whether of animal or vegetable origin is of secondary consequence — are exposed to heat and oxygen, the dead protoplasm decomposes. This detritus is dissolved in water; or, in a state of minute subdivision, may be transported by the air. By either vehicle it may find entrance into the liquids of the body. Bathing the cells of the body, these contaminated fluids will seriously modify the nutrition of those cells. If the quantity of impurity be not too great, the vital forces of the cells soon adjust themselves to the novel disturbance; but if the concentration of the poison exceed certain limits, the cells may pass into a specific condition of disease, or may succumb to new and extraordinary concurrences of external force. Thus viewing the subject, it is easy to see how "telluric emanations" in a temperate climate, where animal and vegetable refuse mingle in the soil, may produce typhoid fever *de novo;* how vegetable detritus alone, under analogous conditions, may produce malarial fever; how the concentrated animal and vegetable filth of a tropical city, festering in the long-continued heat of a southern summer, may produce yellow fever, etc., etc. Thus produced, the propagation of those diseases, like typhoid and typhus, which are dependent chiefly upon animal poison, becomes very easy. In typhus, the infection may, perhaps, be derived directly from the body of the patient. In yellow fever and in cholera the detritus of diseased cells seems to need farther decomposition or combination outside of the body before it can become infective. This is really the only germ theory that has any logical basis in facts. But the limits of this review will not permit further discussion of the subject.

Dr. D. F. Lincoln, of Boston, Mass., contributes the next paper, an exhaustive review of all that is known about "The Atmosphere." This is considered under four heads: I. Normal Components of Air. II. Impurities, Organic and Inorganic. III. Meteorology and Climate. IV. Ventilation and Heating. The essay treats of all these topics with encyclopædic fullness, forming a body of valuable information which will not admit of abstraction.

The first volume is concluded with an excellent essay on "Hospital Construction," by Francis H. Brown, M. D., of Boston, Mass.

(*To be continued.*)

BOOKS AND PAMPHLETS RECEIVED.

Transactions of the Minnesota State Medical Society, 1872, 1874, 1875, 1877, 1879.

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Consumption and How to Prevent It. By Thomas J. Mays, M.D. Cl., pp. 89. 1879. New York: G. P. Putnam & Sons.

Memorial Oration in Honor of Ephriam McDowell, the Father of Ovariotomy. By Samuel Gross, M.D., etc. Cl., pp. 77. 1879. Published by the Kentucky State Medical Society.

Transactions of the Indiana State Medical Society, 1879. Cl., pp. 252.

Yellow Fever: A Nautical Disease. Its Origin and Prevention. By John Gamgee. Cl., pp. 207. 1879. New York: D. Appleton & Co. Chicago: Jansen, McClurg & Co.

Diseases of Women. By Lawson Tait F. R. C. S. Second edition. Thoroughly revised and enlarged. Specially prepared for Wood's Library. Cl., pp. 192. 1879. New York: Wm. Wood & Co. Chicago: W. T. Keener.

The Treatment of Diseases by the Hypodermic Method: A Manual of Hypodermic Medication. By Roberts Bartholomew, M.A.. M.D., &c. Third edition. Enlarged. Cl., pp. 249. 1879. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co.

Clinical Lectures on Diseases of the Urinary Organs, delivered at University College Hospital. By Sir Henry Thompson. Fifth edition. Cl., pp. 355. 1879. Philadelphia: Lindsay & Blakiston. Chicago: Jansen, McClurg & Co.

The Pathology and Treatment of Venereal Diseases. By Freeman J. Bumstead, M.D., LL.D, Fourth edition. Revised and enlarged by the author and Robert W. Taylor, A.M., M.D. Leather, pp. 835. 1879. Philadelphia: H. C. Lea. Chicago: Jansen, McClurg & Co.

System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By William Lersham, M. D. Third American edition, with additions by J. S. Parry, M.D. Leather, pp. 732. 1879. Philadelphia: H. C. Lea. Chicago: Jansen, McClurg & Co.

First Lines of Therapeutics: As Based on the Modes and Processes of Healing, as Occurring Spontaneously in Disease, and on the Modes and Processes of Dying, as Resulting Naturally from Diseases. By Alexander Harvey, M.A., M.D. Cl., pp. 278. 1879. New York: D. Appleton & Co. Chicago: Jansen, McClurg & Co.

A Ministry of Health, and Other Addresses. By B. W. Richardson, M.D., &c. Cl., pp. 354. 1879. New York: D. Appleton & Co. Chicago; Jansen, McClurg & Co.

Health Primer: The Skin and Its Troubles. Cl., pp. 94. 1879. New York: D. Appleton & Co. Chicago: Jansen, McClurg & Co.

Experimentallei Nachweis: Siner Freien Communication der Endolymphatischen und Perilymphatischen Räume des Menschlichen Orlabyrinthes, mit Extra Calynuthischen Intracramellen Räumen. By Dr. Weber Liel. 1879.

Atlas of Histology. By E. Klein, M.D., F.R.S., and E. Noble Smith, LL.D., C.P., &c. Part VII. Philadelphia: J. B. Lippincott & Co. Chicago: Jansen, McClurg & Co.

Early Medical Chicago: An Historical Sketch of the First Practitioners of Medicine, with the Present Faculties and Graduates Since their Organization, of the Medical Colleges of Chicago. By James N. Hyde, A.M., M.D.

Fourteenth Annual Report of the Chicago Hospital for Women and Children, for year ending March, 1879.

Tobacco Poisoning, and Its Effects on the Eyesight. By A. W. Calhoun, M.D. Published from the Transactions of the Medical Association of Georgia.

The Extirpation of the Ovaries for Some of the Disorders of Menstrual Life. By W. Goodell, A.M., M.D. Reprint from the transactions of the Medical Society of the State of Pennsylvania. 1879.

(Die Pochenkrankheit, Heilbar.) Ueber Masmatische Anstecke—Ung Mit Specialler Bezeihung Auf die Entstehung, und das Wesen der Pochenkrankheit. Nebest Angelie Eines Specilisch en Heilverfahrens Gegen de Pocknen von Dr. W. Hübner.

Report of the Resident Physician of Bingham Hall, a Hospital for the Insane.

Proceedings of the Association of Medical Officers of American Institution for Idiotic and Feeble-minded Persons, sessions 1878–1879.

Medical Legislation, being the Annual Address before the State Medical Society. By Nicholas Senn, M.D., President. Reprint from the transactions of the Wisconsin State Medical Society.

Minutes of the Medical Society of the County of New York, 1806–1878. Edited by A. E. M. Purdy, M.D. Part VI.

Lunacy Reforms: Historical Considerations. By E. C. Seguin, M.D. Reprint from Archives of Medicine, October, 1879.

Two Cases of Clonic Blepharospasms as Traumatic Reflex Neurosis. By F. C. Hotz, M.D. Reprint from *Amer. Jour. of Med. Sciences*, October, 1879.

Transactions of the Massachusetts Medico-Legal Society. Vol. I. No. 2. 1879.

Sylvester S. Bliss' Illustrated Catalogue of Surgical Instruments and Physicians' Goods.

An Examination of the Usual Signs of Dislocation of the Hip; also An Inquiry into the Proper Mode of Procedure when Dislocation of the Hip is Accompanied with Fracture of the Femur. By Oscar H. Allis, M.D. Reprint from the transactions of the Medical Society of the State of Pennsylvania for 1879.

WE have to ask the indulgence of our friends for the delay of this issue, due in part to the unusual number of cuts, called for at a late moment, and in part to changes in the typographical department. We expect to issue the January number of this journal, on the first prox.

Selections.

THE PERIMETRIC DIMENSION SYSTEM; A GENERAL SYSTEM OF MEASUREMENT FOR URETHRAL, UTERINE, RECTAL AND OTHER INSTRUMENTS: AND AN ADAPTABLE METRIC GAUGE.* By Charles Hermon Thomas, M.D., Fellow of the College of Physicians, etc. of Philadelphia, Pa.

Three scales for grading and numbering urethral instruments are now in use in the United States, each scale having distinct characteristics. The differences between them are radical and material, and they are not accurately interconvertible. Of these conflicting standards the universally known French scale is doubtless usually preferred, and indications are not wanting which point to its general adoption. The English scale, formerly almost exclusively used, is purely arbitrary in character; has proved inaccurate in practice; is inconveniently limited in its range of sizes, and is rapidly falling into disuse; while the American scale, somewhat recently introduced — though undoubtedly an improvement on the English — is at least lacking in simplicity, and its claim to supplant the French has not been justified.

According to the French scale, each size in a set of catheters or bougies is derived from, and identical with the number of millimeters in circumference which such instrument actually measures — an arrangement at once rational and simple. Thus, while No. 1 is 1 M. M. in circumference, No. 2 is 2 M. M., No. 3, 3 M. M, and so on uniformly throughout.

The American scale, though like the French founded on the metric system, has for its gradations half millimeters in diameter, instead of whole millimeters in circumference. Its numbers, however, are consecutive in units, and therefore correspond neither with the figures which represent diameters nor circumferences. Pratically it differs from the latter in that it does away with one in every three of the French sizes — a somewhat questionable improvement, though the only merit claimed for it; and in doing this a new and arbitrary series of numbers is introduced — a serious disadvantage. Thus, while No. 1 is 1 M. M. in diameter, No. 2 is 1.5 M. M., No. 3 is 2 M. M., and so on, with a widening disparity till No. 20 is reached, which measures 10.5 M. M. by the same method.

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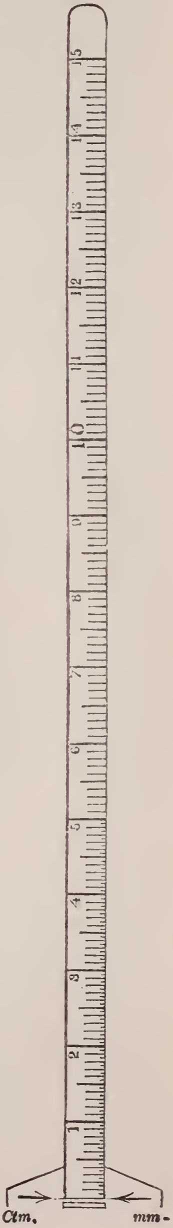
* Exhibited to the Philadelphia County Medical Society, June 25th, 1879.

It will readily be conceded that the demand among those engaged in general scientific work for unity of standard in measures of length, capacity and weight, which has resulted in the wide-spread adoption of the metric system, has a practical basis. Nor will it be questioned that the various branches of the science of medicine have need of the improved methods and means of observation and experiment which have become common to allied sciences. In the subdepartments of urethral, gynæcic and rectal surgery especially, there is urgent need for the establishment of a common standard of measurement and record of the dimensions of the instrument employed; and — no less important — by means of these of the calibre of the passages to which they relate.

A general system suited to this wide range of applications, is practicable, and an undoubted necessity — a system combining the requisites of simplicity, definiteness and convenience of use, together with universal scientific intelligibility. The attainment of this end requires

Fig. 1.



simply the abandonment of all conventional numbers, whether arbitrary or systematic, as indicative of size, and the adoption of actual circumferential or perimetric dimensions, expressed in terms of the metric unit.

This system is applicable to all specula and dilators, together with their related explorers and fixed cutting instruments, for whatever part designed — the male or female urethra, the rectum, vagina, cervix uteri, œsophagus, Eustachian tube, or the lachrymal duct.

In designating sizes and recording data by the perimetric dimension system, millimeters will naturally be used for the smaller instruments and passages, while for the larger, as rectal and vaginal, centimeters should be employed. The changed form of expression will then be, for example, 20 M. M. instead of No. 20, French catheter — a gain in explicitness with no loss of brevity; and in place of Sim's No. 1 vaginal dilator, as at present, its equivalent, 10 C. M.; or, 8 C. M. as the proper substitute for No. 10 of English rectal bougies; or, again, 30 M. M. as closely approximating the dimensions of No. 18 of the American scale.

A comprehensive plan of unification is thus afforded, based upon the best known standard; for, whatever may be the faults of the metric system for general mechanical purposes, it is perfect for surgical uses. Neither can objection be raised to it in this case, on the ground of infraction of established routine, as is done in regard to its introduction into medicine and pharmacy, for in surgery there is no generally accepted standard to be displaced. In fact, except in the case of the urethral instruments before mentioned, there has been no attempt to indicate actual dimensions of any kind in the numbering of surgical instruments; while the sizes of nearly all appliances in use are purely arbitrary, if not in many instances simply the result of accident.

While the proposed system of measurement is fixed and definite, it yet allows entire freedom for individual choice, on the part of the surgeon in the gradation of the sizes of instruments, both as regards their number and their relative dimensions. It includes and utilizes all scales by giving them a common nomenclature; being especially in accord with the French urethral scale, however, for in this, though it is limited to certain fixed gradations, nominal number and actual size expressed in metric terms correspond.*

The importance of measurement by circumference or *perimeter*, instead of by diameter, is not to be overlooked, inasmuch as many instruments are irregular in outline, and therefore not susceptible of measurement by the latter method.

The adaptable metric gauge supplies a ready means for rendering the foregoing plan practicable, and thus securing the highest degree of definiteness and accuracy for purposes of record, comparison, and operative procedure. In illustration: During several years I have made somewhat frequent use of Otis's dilating urethrotome in obstinate and irritable stricture, and, though using at different times the best procurable makes of that admirable instrument, have found that a ready means of verifying or correcting its index was needed. One now in use, and an otherwise faultless piece of mechanism, being accurately measured over the knife in place, shows an excess of size over that registered of 4 M. M. An error like this, not recognized and provided against in an operation of such delicacy and gravity as that of Otis's for internal urethrotomy — in which the only hope of success depends upon strict accuracy and correspondence of measurements — may at any moment be the cause of serious mischief, or even of fatal results. Again, Ellinger's dilator for the cervix uteri has a seemingly perfect parallel motion; but when measured by the gauge shows conicity of 12 M. M., which is increased to 2 C. M., or more by pressure near the points when its sides are separated. Its failure to be retained when in use is thus accounted for. Or, an instance mentioned by a friend, a steel sound which had been looked upon as standard 32 French, proved upon measurement to be fully 39.5 M. M.— an enormous error.

The gauge is a simple appliance, mechanically similar to the glovers' measure, and consists of a narrow, flexible, measuring tape, graduated in centimeters and millimeters (Fig. 1), to which is attached a hand-piece, having a mortise for the passage of the tape. A sliding loop is thus formed (Fig. 2), within which instruments to be measured are placed.

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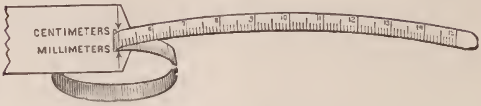
* The American scale, with its distinctive gradations, may be virtually reproduced by the same method, by making successive advances in size of 1.5 M. M. in circumference, as 1, 2.5, 4 5.5, 7 M. M., etc.

Fig. 2.



The two ends of the gauge being drawn upon in opposite directions so as snugly to embrace the enclosed object, the dimensions of its circumference if cylindrical, or its perimeter if of irregular outline, are indicated by arrows placed opposite the point of beginning of the scale.

The material found best adapted for its construction is an extra-heavy bank-note or bond paper, the handle being stiffened with card-board. This paper is very flexible, strong, and durable, is readily printed in fine, but legible, divisions, bears all ordinary use without stretching or breaking, and is not perceptibly affected by atmospheric changes. In practice it answers well for all purposes, including measurements involving delicate cutting edges.

Accurate to a fraction of a millimeter, the gauge becomes an instrument of precision, adapted to ascertaining the perimeters of a great variety of forms, and to expressing their values in uniform terms. It has the special advantage of utilizing old appliances, for by it their equivalence under the general system may be at once determined.

Contrasted with the ordinary gauge-plate, the adaptable gauge will be seen to be possessed of important advantages. The former is capable of measuring cylindrical forms only, and as made, is often inaccurate and always very limited in its range of sizes. The adaptable metric gauge, on the contrary, beside being accurate, is practically unlimited in capacity; measures cylinders perfectly, and is equally well adapted to the measurement of instruments of irregular outlines, as urethrotomes, metrotomes, separable dilators, divulsers, folding specula, and the like. While the gauge-plate is difficult of verification, the correctness of the adaptable gauge may be instantly tested by comparison with any standard metric rule.

109 SOUTH EIGHTH STREET,
PHILADELPHIA, June 10, 1879.

CHARLES H. THOMAS, M. D.,

Dear Doctor: We are now using your adaptable metric gauge as a correct guide in the manufacture of urethral and dilating instruments. It has been particularly serviceable in enabling us to bring the measurement of bougies, catheters, and all urethral-cutting instruments to the point of absolute accuracy.

Thanking you for bringing the gauge to our notice, we would state that we have made arrangements to produce them, and should be most happy to furnish members of the profession with your very useful appliance gratuitously.

Your views in regard to a universal scale are so evidently correct that we are prepared to conform to them.

We are, very respectfully, yours,
J. H. GEMRIG & SONS.

They will be also furnished, without cost, upon application to Messrs. George Tiemann & Co., New York City; D. W. Kolbé & Son, Philadelphia, Pa; Sharp & Smith, Chicago, Ills.; or the American Metric Bureau, Boston, Mass.—From *Philadelphia Medical Times.* Revised, with additions, by the author.

ORIGIN OF PLANTS.—Cabbage grew wild in Siberia; buckwheat originated in Siberia; celery originated in Germany; the potato is a native of Peru; the onion originated in Egypt; tobacco is a native of South America; millet was first discovered in India; the nettle is a native of Europe; the citron is a native of Asia; oats originated in North Africa; rye came originally from Siberia; parsley was first discovered in Sardinia; the parsnip is a native of Arabia; the sun-flower was brought from Peru; spinach was first cultivated in Arabia; the pear and apple are from Europe; the horse chestnut is a native of Thibet; the quince came from Island of Crete; the radish is a native of China and Japan; the pear is supposed to be of Egyptian origin; the horse radish came from the south of Europe.

Summary.

Collaborators:

DR. H. GRADLE, DR. L. W. CASE, DR. R. PARK,
DR. R. TILLEY.

PATHOLOGICAL ANATOMY.

FALSE HERMAPHRODISM IN A WOMAN HAVING PASSED HER LIFE AS A MAN.—Drs. Arigo and Fiorani.—(*Revue Méd.*, Sep. 20, 1879, p. 357.)

The patient, named Pagetti, entered the Hospital Maggiore de Lodi, Aug. 12, 1878. Age, 68 years; stature, small; thick set, robust, with tolerably thick gray beard. On entering the hospital he was suddenly taken with a violent fever, with frequent and severe chills, delirium, dyspnœa, cyanosis, coma, and finally death in twenty-four hours.

Autopsy—Head has virile aspect, bald on top, with gray hair on the sides and back of neck; nose, aquiline; face, oval; lips, chin, and upper part of neck supplied with somewhat thick beard, of gray color; neck robust; shoulders wide; chest developed; nipples small, without any appearance of mammary glands, as in woman. Abdomen a little prominent, adipose, regular, thighs rounded, legs muscular.

In examining the abdominal viscera, after having pushed back the intestines to get at the bladder, there was discovered, to the extreme surprise of all the assistants, a uterus, with two ovaries and the corresponding ligaments. The examination then became more attentive and minute.

On the exterior, the mons veneris, notably elevated and covered with gray hair in considerable quantity. Lower down, a penis, the size of an ordinary thumb, nearly eight centimeters long, of the color and consistence habitual in old men, and terminated at its free extremity by a well-developed gland of regular form, and proportioned to the size of the penis, but destitute of a urethral meatus. Along the posterior surface, exactly in the site of the urethral canal, between the *corpora cavernosa*, a furrow, not covered with skin, but with a mucous membrane, rendered more consistent from exposure; this furrow extended just to the root of the penis, terminating in an opening of somewhat circular form. By the sides of this opening, and descending towards the perineum, two symmetrical folds, formed like the labia majora, covered externally by scattering hairs, and internally by a membrane more delicate than the skin, and resembling a mucous membrane. Taken as a whole, these folds might be considered as a scrotum, divided by a very strongly marked raphé, and containing atrophied testicles; but, on examining with care, they were clearly seen to be labia majora, and on separating them a membrane was found between, without any orifice, intercepting all communication with the internal parts.

In the interior was found a uterus of the size and form of the virgin uterus, the body and neck being well formed; the broad ligaments, the Fallopian tubes, the ovaries, were in the ordinary condition of virgins, and it was not seen whether or not there existed *corpora lutea*, indices of former ovulation or ovules, and in what state they were.

The bladder having been opened, a bougie was passed through the neck and came out at the opening at the root of the penis. Incision of the vagina, behind the bladder, uncovered the cervix uteri, small, cylindrical, of normal size; another bougie was then introduced into the vaginal canal, which was of the ordinary length and capacity. The bougie passed out of the same orifice as the former one, after having struck against the groove which separated the two elevations forming the labia majora, and being bent a little upward.

The measure of the pelvis was 22 centimeters for the bis-iliac diameter, 9 for the bis-ischiatic, and 10½ for the transverse.

She had all the appearances of a man, but was indeed a bearded woman, without breasts, with a greatly developed clitoris. Nothing was known of her youth, whether menstruation or anything approaching it had ever taken place, or whether her sexual life was that of a man or woman.

PRACTICAL MEDICINE.

ARTIFICIAL DIGESTION.—MM. Vulpian and Mourrut. (*Archiv. gén. de Méd.*, October, 1879, p. 490.)

In presenting to the *Acad. de Méd.* a paper by M. Mourrut, entitled, *Recherches sur les Digestions Artificielles*, M. Vulpian communicated a note on the action of the digestive ferments employed in the treatment of dyspepsia. Experiments proved that different samples of pepsine do not have the same degree of digestive power, and that the addition of alcohol to an acidified pepsine or of the natural gastric juice retards digestion. Hence the conclusion that wines and elixirs of pepsine should not be used. M. Vulpian also showed that diastase and pancreatine, mixed with natural or artificial gastric juice are far from exerting upon amylaceous matter so energetic an action as when mixed in pure water with these substances. This fact of the influence of acid media upon these ferments was known, but it remained to be seen, if after having been in contact with the gastric juice in the stomach they would recover all their intensity of digestive action on entering the duodenum. This is the question which M. Mourrut proposed to solve. After having obtained negative results on adding to these ferments a few drops of hydrochloric acid, M. Mourrut neutralized them exactly. The diastase then recovered its activity and rapidly saccharified the starch which it had not modified before. The pancreatine, on the contrary, did not recover its saccharifying properties. Experiments relative to the peptonising action of pancreatine were less clear; but point to a certain extent in the same direction. Other experiments led M. Mourrut to believe that if alcohol does not prevent the action of pepsine upon azotized substances, it retards it, and finally that alcohol also retards the digestive action of diastase and of pancreatine.

JABORANDI IN YELLOW FEVER.—Dr. Giralt. (*Cron. Med. Quirurg de la Habana, and la France Médicale*, Sept. 27, 1879.)

During a practice of twenty-five years, the author has remarked that nearly all the cases of yellow fever, which from the beginning were accompanied by abundant sweating, terminated favorably, even when they passed to the second stage. The ideal of therapeutics then was in this malady, to have a medicament capable of provoking in this pathologic stage an abundant and prolonged perspiration. Unfortunately this medicament was lacking when the author collected his earlier cases, and it is only recently that this vacancy in the materia medica has been filled by the discovery of jaborandi.

Dr. Giralt regards yellow fever as an infectious disease or as an intoxication in which it is necessary to drive out the deleterious principle by the eliminatory organs—sudoriparous glands, kidneys, etc. One of these means of elimination is interdicted, since the secretion and emission of urine are suspended, but the two others remain open and it is precisely here that jaborandi has a double action upon them by the production of transpiration and salivation.

Dr. Giralt prescribed jaborandi for the first two cases of yellow fever he had since the popularization of this remedy. Dr. Monteresi, his pupil, has also used it and their patients became convalescent on the fifth day.

Jaborandi should be given from the invasion of the fever and continued throughout the first period and a part of the second, in the dose of 1. gm. in the twenty-four hours.

SURGERY.

INDICATIONS AND CONTRA-INDICATIONS FOR OPERATIONS ON SUBJECTS AFFECTED WITH CONSTITUTIONAL DISEASES.—M. Verneuil. (*La France Méd.*, Sept. 27.)

The following is the author's *résumé* of a paper read at the 6th meeting of the International Congress of Medical Sciences at Amsterdam.

1st. Surgical operations are not formally contra-indicated in subjects suffering from constitutional diseases; they are even under these circumstances often permitted, frequently useful, and sometimes indispensible.

2nd. Their prognosis is always much more serious than in healthy individuals; it is more uncertain, more difficult to establish, nothing being able to make us judge in advance whether the influence will be good or bad, which the operation will exercise on the general disease, any more than the manner in which this disease will react upon the local reparative process.

3rd. The prognosis differs moreover, according to the different constitutional diseases, and to the individual cases; it varies further, according to the form which it affects, the degree, and principally according to the alterations, more or less extensive and profound, undergone by the organic humors and solids.

4th. The danger inherent to the diathesis is inconsiderable when the latter is still in the state of dyscrasia, it increases notably when appreciable chemical or histological lesions appear; it becomes extreme when the large viscera, liver, kidneys, spleen, heart, lungs, present advanced lesions, as sclerosis, steatosis, amylosis, phlogosis; or when they are invaded by pathological products, special to certain diathetic states as tubercles, gummata, carcinoma, and divers neoplasms.

5th. Diathetic subjects should not be deprived of the benefits of surgical intervention, even when it is perilous. The physician should endeavor to attenuate the gravity of the prognosis, and to assure the success of the operation. He will attain this often by bringing to bear the greatest care in choosing the most proper time, the best method, the most efficacious dressing, and above all by instituting during and after the operation, and even before, if possible, a hygienic, dietetic and pharmaceutic treatment, specially adapted to the constitutional malady.

6th. To establish solidly the indications and contra-indications for operations, to calculate with some precision the chances of success or otherwise, to decide whether to operate or not, the physician should understand thoroughly the pathogeny, the pathology, the natural evolution, the terminations, and the medical treatment of the constitutional disease. This knowledge, which all surgeons do not possess sufficiently, perhaps, prevents more bloody operations than it incites, and gives greater confidence than is generally had in the efforts of nature, seconded by a relatively mild therapeutic treatment.

7th. A conscientious consideration of the immediate or remote result of operations on diathetic subjects, is of a nature to dissipate many of the illusions regarding the puissance of the surgical art. It is painful to say it, but truth obliges it, complete and durable triumphs are rare. Without doubt many operative successes are obtained, but no therapeutic success. We suppress a manifestation of the diathesis or an intercurrent affection, but many times the constitutional disease gains therefrom an intensity and rapidity. Many a scrofulous or cancerous patient would live longer if they remained under medical treatment instead of passing through the hands of the operator.

8th. It is just to add that to be more often palliative than curative, the operations in question are not less sometimes of great utility; in extreme cases they may prolong life, render it less cruel, and for the patient at least leave a chance for hope. In cases less grave, and when the constitutional disease may be successfully treated, the operation favors the cure by gaining time, in suppressing an immediate cause of danger, and in leaving the field more free for medical treatment.

RUSH MEDICAL COLLEGE.—CHICAGO, ILL., Dec. 1, 1879.—A concours for the lectureship on gynæcology, in the spring course of lectures in this college, will be held January 6th, 1880. Applications for admission thereto received from "regular" physicians only. All who desire to compete for the position are requested to communicate with the secretary, who will assign subjects and furnish any desired information relating to the conditions of the concours. At the last spring session of lectures in this college, 148 students were enrolled. Already 113 have matriculated for attendance upon the lectures next spring.—J. H. ETHERIDGE, *Secretary.*

Obituary.

IN Ashton, on Tuesday, October 28th, of heart disease, D. H. Spickler, M.D., aged 49 years.

Dr. Spickler was born in Middleburg, Franklin county, Pa., March 18, 1830, and came west sometime during the year 1853. He was graduated in his profession at Rush Medical College, Chicago, in 1857, soon after which he entered into partnership with Dr. Hewitt, of Franklin Grove, in the practice of medicine. The partnership was eminently successful and continued until sometime during the year 1869, when he entered into relations with P. C. Rooney, in connection with a drug store. In 1871 he left the drug business and became editor and proprietor of the Franklin Grove *Reporter*, which he conducted with much energy and ability for four years. Soon after disposing of the *Reporter* he purchased the Mendota *News*, which flourished under his able management for two years, when he moved to Ashton and again entered the practice of medicine.

The doctor was a man of culture and of rare abilities. Possessing the finest memory, combined with energy, application and a love for books; he became a perfect storehouse of knowledge, and upon all subjects conversed with ease and freedom in his own inimitable style. In the practice of his profession he kept pace with the times. His style as a writer was peculiarly his own. Terse, clear and pointed, he never left his readers in doubt as to his meaning. He stripped his subject of all superfluities, and expressed his thoughts with frankness and independence in a few concise, often humorous, sentences.

But intellect is not all of man; there is something else that enshrines his memory in the heart of his fellow man, and perpetuates his influence long after the portals of the grave have closed over all that is mortal. There are noble impulses that spring from the soul, and like streams of pure water, flow out to gladden all who come within the circle of their influence. The doctor was no stranger to these impulses, as his strict integrity in business and his well known generosity testified. He was the friend of the poor, and during the war attended free of charge the families of those who went to the front. He was also a man to be admired for his social qualities, and the news of his sudden death has thrilled every household and saddened every heart with the feeling that a friend has been lost.

AT a meeting of the senior class of the Chicago Medical College, held Nov. 15, 1879, the following resolutions were adopted in relation to the decease of Mr. Brown.

Whereas, We have heard of the sudden death of Mr. A. S. Brown, a member of the senior class of the Chicago Medical College; therefore,

Resolved, That we sincerely regret the early death of our esteemed classmate, and deeply sympathize with his friends and relatives in this sad affliction.

Resolved, That we recognize in the life of our departed classmate a character of manliness and integrity worthy of the highest regard.

Resolved, That his customary seat among us in the senior lecture-room be duly draped, in memory of his departure.

Resolved, That copies of these resolutions be forwarded to the friends of the deceased, and also to the CHICAGO MEDICAL JOURNAL AND EXAMINER, and *Vidette*, for publication.

Committee for the class,
J. E. BUMSTEAD,
G. W. MASON,
J. M. G. CARTER.

ANNOUNCEMENTS FOR THE MONTH.

SOCIETY MEETINGS.

Chicago Medical Society—Mondays, Dec. 1 and 15.
West Chicago Medical Society—Mondays, Dec. 8 and 22.

CLINICS.

MONDAY.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Prof. Holmes; 3 p. m., Otological, by Prof. Jones.

Mercy Hospital—2 p. m., Surgical, by Prof. Andrews.

Rush Medical College—2 p. m., Dermatological and Venereal, by Prof. Hyde; 3 p. m., Medical, by Dr. Bridge.

Woman's Medical College—3 p. m., Diseases of the Chest, Prof. Ingals.

TUESDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—2 p. m., Medical, by Prof. Hollister.

WEDNESDAY.

Chicago Medical College—2 p. m., Eye and Ear, by Prof. Jones.

Rush Medical College—3:30 to 4:30 p. m., Diseases of the Chest, by Dr. E. Fletcher Ingals.

THURSDAY.

Chicago Medical College—2 p. m., Gynæcological, by Prof. Jenks.

Rush Medical College—3 p. m., Diseases of the Nervous System, by Prof. Lyman.

Eye and Ear Infirmary—2 p. m., Ophthalmological, by Dr. Hotz.

Woman's Medical College—3 p. m., Surgical, by Prof. Owens.

FRIDAY.

Cook County Hospital—2 to 4 p. m., Medical and Surgical Clinics.

Mercy Hospital—2 p. m., Medical, by Prof. Davis.

SATURDAY.

Rush Medical College—2 p. m., Surgical, by Prof. Gunn.

Chicago Medical College—2 p. m., Surgical, by Prof. Isham; 3 p. m., Neurological, by Prof. Jewell.

Woman's Medical College—11 a. m., Ophthalmological, by Prof. Montgomery; 2 p. m., Gynæcological, by Prof. Fitch.

Daily Clinics, from 2 to 4 p. m., at the Central Free Dispensary, and at the South Side Dispensary.